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ABSTRACT

Summarized in the literature review are 161 sources of information on the topic of learning disabilities in secondary school students. Sources are categorized under eight headings: secondary learning disabilities--definition, identification, incidence, and characteristics; educational programing for the secondary learning disabled adolescent--position papers and program descriptions; education and management for the secondary learning disabled population--issues, approaches, techniques, and case studies; career education for the secondary learning disabled student; learning disabilities and juvenile delinquency; the learning disabled adolescent--self perception; guides for parents of the learning disabled adolescent/medical considerations; and training programs for teachers of secondary learning disabled students. Entries are listed alphabetically by author and usually include the following informaton: title, source, publication date, pagination, ERIC (Educational Resources Information Center) accession number when applicable, and a summary. Appended are a list of available bibliographies and a listing of sources. (SBH)

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LEARNING DISABILITIES IN THE SECONDARY SCHOOL: A REVIEW OF THE LITERATURE

Title III: Curricular Development for Secondary Learning Disabilities

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Introduction

The following review of the literature is a compilation of current information on the topic of learning disabilities in secondary school students. The search was accomplished as part of the Title III project entitled Curricular Development for Secondary Learning Disabilities, and conducted under the auspices of the Montgomery County Intermediate Unit, Division of Special Education Services.

It would have been an impossible enterprise to tackle all of the literature pertaining to learning disabilities; some limitations had to be imposed in order to reduce the scope of the task to manageable proportions. Therefore, the search was confined to the learning disabilities at the secondary level.

Current periodicals constituted the primary information source; selected indexes, bibliographies, and computerized searches proved valuable. Hardbound texts were purposely omitted for two reasons: the numerous texts in learning disabilities and special education were not specific to secondary learning disabilities, and they were already well known and available to parents and professionals alike. We did find several softbound texts and pamphlets particularly germane to the topic of secondary learning disabilities and these were included. Unfortunately, we were not able to secure every reference which was known to us, though we did make a diligent effort to do so. Therefore, there are some unavoidable omissions and, of course, this review like any other is outdated as soon as it is published.

Our general procedure was to start with the most current issue of a particular journal and proceed backwards until we no longer found useful references. The topic of learning disabilities at the secondary level is, we found, a very recent area of inquiry, references predating 1970 are few in number; relevant articles appearing before 1965 are very scarce. An overview of all of the sources consulted is presented in Appendixes A and B.

In order to maximize the usefulness of the literature search for the reader, a summarization of each reference was prepared; in all, 161 summaries are contained within this text. The summaries are categorized under eight separate headings:

1) Secondary Learning Disabilities: Definition, Identification, Incidence, and Characteristics

2) Educational Programming for the Secondary Learning Disabled Adolescent: Position Papers and Program Descriptions

3) Education and Management for the Secondary Learning Disabled Population: Issues, Approaches, Techniques, and Case Studies

4) Career Education for the Secondary Learning Disabled Student

5) Learning Disabilities and Juvenile Delinquency

6) The Learning Disabled Adolescent: Self-Perception

7) Guides for Parents of the Learning Disabled Adolescent/ Medical Considerations

8) Training Programs for Teachers of Secondary Learning Disabled Students

No attempt has been made to evaluate any of the articles or the information or opinions stated therein. Nor have we attempted to synthesize the literature and review it as a whole as is the usual practice in the traditional approach to literature search and review. Rather, our objective was to compile and present the information in a meaningful and useful manner, to provide the reader with easy and ready access to the current literature on learning disabilities at the secondary school level, and to leave judgments to the reader's discretion.

Chapter I

Secondary Learning Disabilities: Definition, Identification, Incidence, and Characteristics

Chess -- Neurological dysfunction and childhood behavioral pathology.

Clarke, Olson -- Characteristics of 15-year-old boys who demonstrate various accomplishments or difficulties.

de Hirsch -- Two categories of learning difficulties in adolescents.

Deshler -- Learning disability in the high school student as demonstrated in monitoring of self-generated and externally generated errors.

Deshler -- Psycho-social characteristics of learning disabled adolescents.

Frank -- Are we really meeting their needs?

Hagin -- How do we find him?

Hammill -- Adolescents with learning disability: Definition, identification, and incidence.

Hartlage -- Differential diagnosis of dyslexia, minimal brain damage, and emotional disturbances in children.

Herrick -- Disabled or disadvantaged: What's the difference?

Lehtinen-Rogan -- How do we teach him?

Mordock, Novik, Terrill -- The Bender-Gestalt test in differential diagnosis of adolescents with learning difficulties.

Nall -- The adolescent with learning disability.

Rice -- Learning disabilities: An investigation in two parts.

Rourke, Yanni, MacDonald, Young -- Neuropsychological significance of lateralized deficits on the grooved pegboard test for older children with learning disabilities.

Strother -- Who is he?

Thompson -- Moving toward adulthood.

Tolor -- Incidence of underachievement at the high school level.

Ullmann -- Measures of learning disability for different purposes.

Vockell, Bennett -- Birth order, sex of siblings, and incidence of learning disabilities.

Wilcox -- Identifying characteristics of the neurologically handicapped adolescent.

Wissink -- A procedure for the identification of children with learning disabilities.

Chess, S. Neurological dysfunction and childhood behavioral pathology. *Journal of Autism and Childhood Schizophrenia*, 1972, *2*, 299-311.

The relationship between neurological dysfunction and childhood behavioral pathology was examined in the case material of a nineteen year child psychiatry consultation practice involving 1,400 patients, 838 boys and 562 girls, ranging in age from thirteen weeks to 19 years at the time of initial consultation. Eighty eight neurologically damaged children were identified. Each of these 88 children was matched by age, sex, and year of consultation with a neurologically intact patient. Nature and frequency of presenting complaints were compared for the two groups. A comparison was made of the frequency of presentation of the special symptoms of hyperactivity, short attention span, distractibility, mood oscillation, high impulsivity, and perseveration, usually considered to be associated with cerebral dysfunction. Psychiatric diagnoses of the two groups were compared.

Perseveration was the sole symptom which was statistically more characteristic of the neurologically damaged children. With this exception, there was close agreement in the number of children in each group with one or two of the special symptoms. However, clustering of three or more of the special symptoms was significantly related to neurological damage. The absence of all of these symptoms was highly characteristic of the neurologically intact group.

Clarke, H. H., & Olson, A. L. Characteristics of 15-year-old boys who demonstrate various accomplishments or difficulties. Child Development, 1965, 36, 559-567.

The authors' purpose in undertaking this study was to compare various characteristics of 15-year-old boys selected at random. The subjects were then classified into groups by either their achievements or lack of achievements by their teachers and coaches. Seven groups were identified: athletes, scientists, fine arts, leadership, scholars, poor students, and delinquents.

Thirty two variables were measured. It was found that the athletes were "more mature, were more mesomorphic in physique,...stronger,...higher intelligence,...greater chest girths than the other boys. The group of boys designated "scientists" had a higher mean IQ, had better mental health, and high academic achievement when compared to other subjects of that age. The only characteristic that differed the boys in the fine arts group from their peers was a higher mean IQ. The group chosen as leaders also exhibited a high mean IQ and nine out of the ten boys excelled in athletics.

The boys studied in the scholar group possessed high mean IQ and superior academic achievement in seven measures. On the other hand, the poor students had a lower mean IQ than the other boys and lower means on three academic achievement tests. The delinquent boys in this study did not differ from their peers in any of the variables examined. Clarke and Olson found that some of their test results were different from those of some previous similar studies.

de Hirsch, K. Two categories of learning difficulties in adolescents. American Journal of Orthopsychiatry, 1963, 33, 87-91.

de Hirsch differentiates between two categories of learning difficulties in adolescents. As a group, the adolescents in question were all underachievers in terms of their intellectual endowment, little interested in school work, and anxious; some were quite hostile.

Despite the overt homogeneity of the group, de Hirsch maintains that they fall into two categories. Group A contains adolescents who have severe psychological disturbances which impede academic success. These students generally have good intellectual potential but are strikingly infantile and passive. While they may experience little difficulty in the early school grades, their performance begins to deteriorate as they move toward the higher grades. Many in this group are highly articulate and many are avid readers. Nevertheless, they do poorly in all school subjects. "Essentially boys in Group A are passive and infantile individuals with little or no psychic energy to invest." Their lack of ego strength and their physiological immaturity are striking.

Remedial work for this type of student emphasizes achievement of identification with the teacher and finding some area of interest. Much of these youth's learning is fragmented and diffuse. The discrepancy between potential and performance tends to persist; prognosis is not good.

Adolescents in Group B display evidence of a residual language disability: higher performance score than verbal score on the WISC, spelling difficulties, poor quality of written work, etc. "In the main, they are fairly inarticulate youngsters for whom language is not a convenient tool."

Psychologically, the youngsters in Group B have a very low frustration tolerance and can be quite explosive. They often are defiant and openly angry. Their feelings are not repressed or submerged as are those of the boys in Group A.

In summary, the adolescent boys categorized by de Hirsch are often viewed as one undifferentiated group by other professionals. However, she contends that a separation is necessary because for Group A individuals academic difficulties stem from ego impairment and severe character disorder, while for Group B individuals scholastic dysfunction (based on residual language dysfunction) precedes and precipitates the overt psychological problems. Different instructional treatment programs are indicated.

Deshler, D. Learning disability in the high school student as demonstrated in monitoring of self-generated and externally generated errors. (Doctoral dissertation, University of Arizona) Ann Arbor, Michigan: University Microfilm, 1975. No. 75-4135.

This study attempted to differentiate between the learning disability adolescent and the non learning disability adolescent by investigating some characteristics which relate specifically at the high school level. A Bayesian approach to psychometric test data was used in the identification of learning disabilities, as well as a comparison of the performance by students on selected tasks.

Five school related tasks, requiring the monitoring of self-generated and externally generated errors, were designed to discover whether a monitoring deficit would be a good indicator of learning disabilities.

Two groups of students (36 in each group) were selected; one group was known to exhibit learning disabilities, the other was "normal." The same tasks were administered to both groups and scored to determine if the groups could be differentiated on a variety of error measures. The results indicated that: (1) on the creative writing task, significant differences were found between the variances and means on the measures of errors, errors detected. percent errors detected, and non-errors detected for the learning disability and nonlearning disability groups; (2) on the editing task, significant differences were found between the means and variances on the measures of errors detected, percent errors detected, non-errors detected, and percent errors corrected for both groups, no significant difference was found on errors corrected; (3) on the yes-no spelling task, a significant difference was found between the two groups in detectability of errors; and (4) on the vocabulary task, a significant difference was found between the two groups on their detecting of errors in vocabulary usage. However, the LD group did better on this task than they did on the spelling tasks.

Analysis of results suggest that these tasks were effective discriminators and that the component disability of monitoring is diagnostic at the high school level. However, these results should be treated as preliminary in nature and suggestive for future research efforts and refinements.

Deshler, D. Psycho-social characteristics of learning disabled adolescents. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

Deshler observes that little data has been gathered on the characteristic learning disabled adolescents, although there is a great need to differentiate this target population from the larger secondary level population. He notes that identifying the characteristic deficiencies that result from specific disabilities need not result in stereotyping and is clearly relevant to understanding the means by which individual students or groups of students learn. Clear definitions of inclusion and exclusion criterion levels must be developed, however, before such identification takes place.

Deshler argues that the following considerations should be kept in mind in the study of the characteristics of an adolescent learning disability population: (1)no one characteristic is sufficient to determine the existence of a learning disability; (2) cutoff points, though used in identifying other exceptionalities, are less valid in the case of the learning disabled where clear cut dichotomies between the disabled and nondisabled do not exist; (3) one characteristic of a learning disability, recently suggested as critical, is that it remains at maturity, though the nature of the deficit pattern may have changed as the individual matures; (4) of the characteristics associated with learning disabilities, perhaps none are totally independent, and groupings based on specific traits are not mutually exclusive, (5) of all possible learning behaviors which can be identified as a possible area of disability, only reading and mathematics have been studied in any depth. Among adolescents closer to the job market, perhaps many more areas of behaviors should be considered; (6) a set of universal adolescent experiences, or even a weaker claim of adolescence as a critical developmental period, though often postulated in the literature of adolescence, has never been established. The one thing which almost all will agree to is that adolescence is a period of stress for the maturing teenager.

Deshler divides subject and environmental characteristics describing and accounting for adolescent learning difficulties into three categories: cognitive factors, personality-social factors, and perceptual-motor factors.

In the area of academic-cognitive factors, Deshler notes that certain of these appear to show a decrease in strength in early adolescence. This may be an artifact of percentile scores and different schedules of maturation. It may also be traceable to the neglect of areas of strength for areas of weakness. But more commonly, perhaps, changes in cognitive ability as a function of age may "be the result of the assessment procedures used to measure these changes."

Deshler

Deshler cites a number of studies showing that learning disabled students continue to have difficulties with reading, spelling, writing, and language at the secondary level. He has found "the ability to synthesize word parts into wholes remains unmastered," perhaps the more important at this level because of speed becoming an important performance variable. Spelling problems have been noted in several studies of disabled readers. Writing difficulties, though more often overlooked, appear to be almost universally present in the reading disabled population.

A major goal for learning disabled adolescents, especially given the lack of close supervision by one particular teacher who knows the individual well, must be the ability to function independently. Structure at this level, however, is often subtle and to this group the lack of it can be destructive. Help in organization must be available, and students must be taught to better shape their own progress and monitor error patterns. Since a deficit in this area of feedback has been estimated as three times as common in the learning disabled population as among other adolescents, the need is pressing, in social as well as academic areas.

Deshler notes that some recent as well as earlier studies confirm the fact that for all adolescents, certain social factors seem to be related to academic success. Among these are "intra-family understanding and acceptance, encouragement of students' plans, communication within the home, spending joint leisure time together, and happiness within the home." Also, the more authoritarian the parents, the lower student achievement, though too little discipline has also been shown to be related to low achievement. But of all social factors, perhaps the most damaging to the learning disabled adolescent is an aversive personality, partially conditioned by repeated failure, that repels rather than attracts people.

Among perceptual-motor factors, Deshler observes that the most frequently cited correlate of learning disability, hyperactivity, seems rare in adolescents, and where it exists, differs markedly from the motor activity of younger learning disabled children. Attention difficulties, though they may decrease with age, will still not permit the adolescent to tolerate the long class periods and lectures still common in secondary schools. Handwriting of learning disabled children which was poor in early years usually remains poor, and typing may not be a possible alternative. Though all these factors tend to improve with age, the improvement may not be sufficient to change the perceptions of the adolescent of himself and the attitudes of others toward him.

Frank, D. F. Are we really meeting their needs? Academic Therapy, 1973, 8, 271-275.

In 1972, the Department of Health, Education and Welfare estimated that the limited productivity of educationally handicapped adults is causing this country to lose three billion dollars a year in gross national income. The problem is magnified by many unknowns. The author's opinion is that educational leaders do not know the number of students with specific learning disabilities nor do they know the severity of these disabilities. He feels that what is needed most is a standardized method which will enable us to distinguish, with a reasonable degree of accuracy, who these youngsters are and what specific disabilities or problems they have.

Since this is a national problem, the basic diagnostic parameters should be established at the federal level along with the criteria which would ensure that all youngsters are correlated to the same population baseline. The entire method, materials, and guidelines should be developed and provided by a federal agency to ensure conformity throughout the educational system. Then it must be applied on a mandatory basis.

The establishment of this effort at a federal level will serve to assign a specific organization with the responsibility to identify the total problem, to establish a fact-gathering agency to calculate the magnitude of the problem, and to develop a group of experts and administrators who could guide our legislators in matters pertaining to the problems of learning disabled children in this country. This last point is significant not only at the federal but at the state, county, and municipal levels. Very few elected officials have knowledge about learning disabled children. Financial assistance is being received for less than two percent of the children with learning disabilities in contrast with the thirty five to forty percent afflicted.

Hagin, R. A. How do we find him? In E. Schloss (Ed.), The educator's enigma: The adolescent with learning disabilities. San Rafael, California: Academic Therapy Publications, 1971.

The syndrome of specific language disability is a discrepancy between expectancy and achievement in the use, comprehension, and written expression of ideas. Adolescents with specific language disability have difficulty with one or more of the language arts. These difficulties occur despite intact senses, adequate intelligence, conventional instruction, and normal motivation. When these children are examined with psychological, neurological, and perceptual tests, the following characteristics are found: lack of neurological organization corresponding to cerebral dominance; visual-motor difficulties; auditory problems; body image problems; tactile figure-background problems.

The author's experience leads him to conclude that careful, individual, clinical diagnosis is necessary to locate and differentiate the child with specific language disability. She suggests observations of the following characteristics: highs and lows in functioning; methods by which the child handles language; handwriting (with particular emphasis on how the child grips the pencil); approaches to the task of reading; spelling methods; difficulties he has had with other kinds of symbols; and spatial abilities. Careful clinical evaluation requires supportive information concerning the child's developmental history, neurological functioning, psychiatric status, psychological and perceptual abilities, and his educational skills.

The author reports on the follow-up of three children with specific language disability. At adolescence these children are seen at their most difficult time, for there is an interplay of constitutional factors, of developing psychological needs and defenses, and of external pressures and supports. Teaching which has its foundation in careful, multidisciplinary diagnosis is important to the realization of the child's potential abilities.

Hammill, D. Adolescents with learning disability: Definition, identification, and incidence. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

The field of learning disabilities has traditionally been dominated by those concerned with preschool and elementary aged children, many with developmental rather than acquired handicaps. The study of learning disabilities has been conceptualized on the basis of research with older children, adolescents, and adults, many with acquired trauma-induced disorders. This disparity in age and causal factors becomes of problematic importance when attempting to deal with the issues of definition, identification, and incidence of learning disabilities in a secondary level population.

A variety of definitions of the term "learning disability" exist, allowing all educators and researchers to find one with which they feel compatible. Fundamentally though, these definitions incorporate three basic areas of concern. First, the student must exhibit a disparity between abilities, either those expected and achieved, or those of various types. Second, the disparity must be caused by a disturbance in some basic psychological process. Third, learning disability posits the exclusion of such factors as mental retardation, emotional disturbance, and environmental handicaps.

Although such a definition may be acceptable to a variety of professionals, in application its very acceptability causes difficulties, ranging from professional disputes to questionable funding for equally questionable programs. Those whose work has been in clinical and private school settings have tended to operationalize the definition according to a "strict constructionist" framework, including only children classifiable as dyslexic, dyscalculic, Strauss-syndrome, etc. Because of the clinical nature of their settings, the "strict-constructionists" have little difficulty in finding pure cases to satisfy the disparity, process, and exclusion clauses of the definition.

In the public school setting, with its aim of supplying education to all while functioning under the administrative need to group children together, implementation of any but a liberal interpretation is difficult, if not impossible. Case studies show that high school learning disabled students tend to exhibit a variety of contributing factors--psychoneurological, environmental, emotional, and academic. Further complicating the issue is the need for administrators unfamiliar with the field to convince state and federal funding agencies that they are deserving of funds. The result has been programs providing special services to students who may be mildly disturbed, disadvantaged, unmotivated, underachieving, or "learning disabled." While proponents of such an approach argue for it on the basis of the similarities in symptoms and remediation, as well as furthering efforts toward "mainstreaming" of handicapped students, it can also be argued that a liberal interpretation would more appropriately function as a way to provide all students with those services they need, regardless of handicap.

A third approach to identification integrates the clinical research-oriented interpretation of learning disabilities with the educational child-oriented interpretation. Its advocates focus on psychological ability constructs in looking for process deficits. Thus, a child must not only be a poor reader and a good math student, he must exhibit deficits in auditory or visual memory, closure function, etc. Current research suggests, however, that such process variables play an insignificant role in academic or linguistic competence.

No studies of incidence of learning disabilities at specifically the secondary level exist at present. Among those estimating incidence in overall school populations, variations of from three percent to 30 percent are common, traceable to a lack of an operational definition of learning disabilities. Until such an agreed upon definition exists, no conclusive estimates can be made.

Hartlage, L. C. Differential diagnosis of dyslexia, minimal brain damage, and emotional disturbances in children. Psychology in the Schools, 1970, 7, 403-406.

The study reported here examines patterns of responses made by children on the WISC, Bender-Gestalt, and Wide Range Achievement Test (WRAT). Eighty one cases were classified into nonoverlapping categories from the records of 200 cases referred for diagnosis of school difficulties over a two year period to a university medical center pediatric neurology clinic. The subjects were 81 children (61 boys, 20 girls) who were classified into the diagnostic categories of dyslexia, minimal brain damage, or severe emotional problems. The children's ages ranged from 6 years, 9 months to 14 years, 4 months, with IQs ranging from 85 to 133. Almost all of the children were from middle class homes, had no social or cultural deprivation, and had been exposed to good educational opportunities.

The use of formalized Bender-Gestalt prediction scores seemed to be of little value in the identification of dyslexic children in a mixed sample. Neurological evaluation was also of little value in distinguishing children with dyslexia from other diagnostic groups.

A possible instrument for superficial differentiation of the three diagnostic categories appeared to be the WRAT reading discrepancy score. Since the major diagnostic problem seemed to be distinguishing dyslexic children from minimally brain damaged children, the large mean discrepancy differences on WRAT reading scores between these two groups made this test sensitive to the most difficult diagnostic differentiation.

Herrick, M. J. Disabled or disadvantaged: What's the difference? Journal of Special Education, 1973, 7, 381-386.

At present, learning disabled and culturally disadvantaged youngsters are viewed as two distinct and separate groups. The culturally disadvantaged are excluded by definition from programs for LD children. The author feels that the two groups are, behaviorally speaking, more alike than different and "that the specifics differentiating these two students were simply degrees of the same behavior."

The difficulties of the LD student are attributed to physical causes, the learning problems of the disadvantaged child are attributed to cultural factors. However, many professionals hold that cultural deprivation (or socioeconomic deprivation) may cause retardation and/or impaired cognitive functioning. "If the cognitive function resides in the central nervous system, then a deprivation-caused deficiency must be considered by the school as a learning disorder, for the organism takes in less information or it takes it in less efficiently and cannot progress according to the norm set up by the school."

Etiological factors, even if they could be pinpointed, are of little value in planning instructional strategies which must reflect the child's current repertoire of skill and achievements. Behaviorally, we cannot distinguish between the two groups at this time. Behaviorally speaking, there is no basis for exclusion of the culturally deprived from the category of LD. Every culturally deprived child is not also learning disabled; but many are and the fact of their low socioeconomic status should not prevent them from receiving much needed remedial services. Special education should provide for the deprived child with new forms of compensatory education.

Lehtinen-Rogan, L. E. How do we teach him? In E. Schloss (Ed.), *The educator's enigma: The adolescent with learning disabilities*. San Rafael, California: Academic Therapy Publications, 1971.

The children with special learning disabilities--perceptually handicapped children--are the ones who can't achieve well without special help and understanding. The basis for their poor development is not always clear. According to the author, it may be related to "immaturity," as low maturation of the central nervous system which produces a lag in the development of some abilities. It may be the result of minimal brain damage occurring early in the child's life, and which may not have reduced the child's intelligence significantly, but interferes with its expression. It may be the result of a genetic factor.

By the time a child with learning disabilities related to minimal brain dysfunction reaches the junior high school or high school level, many of the more obvious distinguishing features he may have had as a younger child have smoothed out and become less noticeable, if not less troublesome. This is due to the combined effect of the physiological maturation that has been going on, helping his central nervous system "catch up" somewhat, and to the learning that has occurred both about the kinds of behaviors that are acceptable and the kinds that are not, as well as about various compensations he may need to make in order to get along.

The author describes the most common characteristics of perceptually handicapped children: distractibility, inability to sustain attention, breaks in continuity of thought, poor feedback, overlooking or not noticing, poor organization, difficulty in selecting, lack of resourcefulness, deficient memory.

Lehtinen-Rogen presents a series of suggestions for teachers of children with learning disabilities which emphasizes the importance of a humanistic atmosphere in the schools.

Mordock, J. B., Novik, E., & Terrill, P. A. The Bender-Gestalt test in differential diagnosis of adolescents with learning difficulties. Journal of School Psychology, 1968-69, 7, 11-14.

The investigation was designed to study the effectiveness of the Haine and Koppitz scoring systems in differentiating adolescents with demonstrated central nervous system (CNS) impairment from those without such impairment. In addition to an analysis of Bender-Gestalt (B-G) scores alone, their use in combination with intelligence measures was examined since patients with right cerebral hemispheric lesions often score lower on performance than on verbal measures of intelligence.

Eighty four adolescent subjects were selected from a suburban residential treatment center. All were achieving well below age expectation. Twenty five had been diagnosed by physicians as demonstrating CNS impairment (mean age 14.33, S.D. 2.22). For 59 subjects (mean age 14.94, S.D. 2.30), medical and psychiatric examinations failed to disclose even suggestive evidence of encephalopathy.

Results of the data show that the significant differences between the scores of the CNS impaired and psychiatric groups indicates that both scoring systems discriminate between the two clinical groups. Plotting the distribution of scores, however, demonstrated that neither scoring system is of much value in individual prediction. The authors feel that these results suggest that the application of either the Haine or Koppitz scoring systems to Bender-Gestalt performance does not appear worthwhile when evaluating adolescents with learning problems. It is suggested that the B-G be deleted from the school psychologist's diagnostic armamentarium when attempting to make differential diagnoses of adolescents who resemble those in the present sample.

Nall, A. The adolescent with learning disability. In *Progress in parent information, professional growth, and public policy*. Proceedings of the Sixth Annual Conference, ACLD, Fort Worth, 1969.

The author examines some characteristics of children with learning disabilities and how they affect these students in the average junior or senior high school. One of these characteristics is a short attention span, yet, these students are expected to sit in one room for 55 minutes and be able to give the class their full attention.

Another characteristic of learning disabled children is perseveration; however, they are supposed to be able to sit in a class of one subject and at the ringing of a bell, drop that subject and become engrossed in another. These children are unable to leave one subject and go on to the next just because a bell rings--before the day is over they become totally confused. Perseveration unchecked and misunderstood by adults can cause many difficulties in the classroom for these students.

Poor auditory memory is often found in the learning disabled student. The child listens intently but is unable to take notes because by the time he starts to write he has forgotten what was said.

Difficulty in visual perception has been recognized as a cause of school learning difficulties and many good school programs have been set up and much success has been achieved. However, the adolescent who has perceptual problems and who drives a car has his own set of problems which needs to be remedied.

It is recognized that many children have difficulty with visual perception, but much of our teaching is done with visual aids. It is the author's opinion that movies and television have a negative effect on this child's learning as well as on his behavior.

Nall believes that because of the great number of children experiencing learning disabilities, a school system would be justified in providing a wing of a high school or junior high school for these students. In this wing they could have self-contained rooms and individualized teaching. Special training would be given in these classes in an attempt to help adolescents control perseveration and distractibility, to be able to take the pressure and frustration without negative reactions, and to overcome adverse characteristics that could hinder future success in college or on a job.

Rice, D. Learning disabilities: An investigation in two parts. (Part one) *Journal of Learning Disabilities*, 1970, 3, 149-155.

Rice reviews the "clinical diagnostic findings of a multidisciplinary study" of LD students, which have implications for program planning for all LD students. He defines learning disability as a "selective inability to learn reading, spelling, and arithmetic at the expected rate." Data for the study was gathered over a two year period by the Dyslexia Clinic at the Indiana University Medical Center. The diagnostic procedure was divided into five parts: (1) school history, (2) ophthalmological examination, (3) psychoeducational evaluation, (4) neurological examination, and (5) staff conference.

Significant deficit was defined as a standard achievement score (WRAT), fifteen or more points below the full scale IQ (WISC), since this represents approximately one standard deviation on both tests. Six deficit categories are discussed in this article: reading, spelling, and arithmetic; reading and spelling; reading only; spelling and arithmetic; spelling only; arithmetic only; and no significant disability.

In reviewing the data, Rice made a number of observations. These include: the ratio of male to female referrals is about five to one; there is little support for other findings of a performance vs. verbal WISC discrepancy for LD; reading deficit alone is rare (8 of 190 cases); only 57 percent of referrals showed significant deficits in one or more academic areas; of the 43 percent (82 cases) without significant academic deficit, 22 show evidence of brain damage, 11 appear to have emotional or behavioral difficulties in the classroom, 37 are of borderline (79 to 89 IQ) mental ability, 5 appeared genuinely retarded (below 70, WISC); ten of the 190 cases resulted in psychiatric referrals before educational planning; approximately 20 percent of the study population appeared dyslexic (c.f. Rabinovitch who says that less than 25 percent of reading problems are incidences of dyslexia); except in category IV, there was significant evidence of visuo-motor difficulties (25 percent to 57 percent incidence) in all categories; and low incidence of uncorrected vision problems.

Rice says that the experience of the study team indicates that a study setting apart from the normal school setting causes serious communication problems. If schools made use of the talents of qualified people already available to them, better studies would result.

The study population consisted of 190 Ss ranging in age from 6-2 to 16-9. There were 157 boys, 33 girls. Grade placements at the time of evaluation included kindergarten and grade one through ten; the vast majority of the student referrals came from first (25), second (39), third (43), fourth (34), and fifth (24) grades. Only three kindergarteners were referred and total referrals for grades six through ten were limited (17).

Rourke, B. P., Yanni, D. W., MacDonald, G. W., & Young, G. C. Neuropsychological significance of lateralized deficits on the grooved pegboard test for older children with learning disabilities. Journal of Consulting and Clinical Psychology, 1973, 41, 128-134.

The reported study compares the performances of ten to fourteen-year-old children (IQs between 80 and 120) exhibiting learning disabilities with those of adults with known cerebral lesions. The authors felt that if the "patterns of performance" of both groups were similar, then it would support the theory that cerebral dysfunction is a factor in learning disabilities. The paper outlines several studies of adults with cerebral lesions.

Related patterns were found between lateralized lesions and performance on the Wechsler-Bellevue. Using this information, learning disabled children were grouped according to lateralized motor deficits and then given the psychological tests. If the results of these tests paralleled the results of the adults with brain lesions, it would prove that the etiology of learning disabilities includes some cerebral dysfunction.

The hypothesis was proven by the authors; the Ss results were comparable to those of the previously tested adults. Learning disabilities did indicate, in the older child, some cerebral dysfunction. The authors do caution, however, that these results cannot be generalized to include younger children.

Strother, C. R. Who is he? In E. Schloss (Ed.), The educator's enigma: The adolescent with learning disabilities. San Rafael, California: Academic Therapy Publications, 1971.

There has been so much emphasis on the early diagnosis and treatment of children with learning disabilities that the problems of the adolescent have been neglected.

A difference of opinion exists as to the etiology of learning disorders. One faction of educators maintains that these learning disabilities represent a dysfunction that is either of genetic, traumatic, or developmental origin. Another group maintains that the evidence is not sufficiently clear-cut to warrant the assumption that there is an underlying central nervous system disability. There is a third group that maintains that a presumed or established central nervous system etiology is of no importance because it does not help in working with the child. The author agrees with the second and third groups because of his distrust of the reliability of neurological diagnosis.

It is important to define the definition of learning disability for educational purposes. When an attempt is made to set up special facilities and educational procedures for these children, specific criteria must be agreed upon. This must be done for admissions eligibility, for determining the kinds of programs that will be provided, and for funding decisions.

The advisory committee on the Education of the Handicapped has come up with the following definition on which the Office of Education is now basing its allocation of funds:

> Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injuries, minimal brain dysfunction, dyslexia, developmental aphasia. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage.

At the junior high or high school level, there is a tremendous overlay related to this primary learning disability and it confuses the picture. It makes it more difficult to discriminate between the child with a primary learning disability and the child who is emotionally disturbed, or the child who is a behavior problem because he is acting out.

There are four major categories of disturbance and behavior which the teacher may find useful in his observation of children with special learning disabilities. These are: visual and auditory problems, hyperactivity, conceptualization problems, and speech and writing problems.

Thompson, A. Moving toward adulthood. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

Adolescence is a stormy, difficult time for all teenagers and their parents. The child who is neurologically handicapped has an even harder time adjusting to changes in himself and his environment. Some of the characteristics common to these youngsters which make life so difficult, are their impulsivity, suggestibility, short tempers, impaired self-direction, low self-esteem, short sightedness, and poor social skills. This paper explores possible means whereby social conditions can be altered to make life less frustrating for these children and their families.

One area which might be changed is the matter of norms. Thompson feels that while learning problems are real enough and frequent enough, the present system is creating more problems unnecessarily by putting children in special classes when all they really need is a little more time to mature. The author believes that there is no defensible reason for classifying a developmental lag of one to three years in reading as a learning problem. This strict adherence to norms creates an inflexible school program which is another major deterrent for these children. She also states that by enriching what is offered to this child and allowing him to develop at his own speed, the majority of what we are calling learning problems would be eliminated.

Feelings of failure are very harmful to one's belief in oneself. There should be a way to deal with the exceptional child and his inability to adhere to norms without creating these feelings at a very young age. The author believes that "for the most part, failure is a name for the fact that we have asked children to do something that under the circumstances they cannot do."

In the area of authority, the idea is expressed that with these youngsters, punishment is an inadequate deterrent to undesirable behavior. Since there is often little association between behavior and experience, pain inflicted by authority figures due to infractions of the rules can easily cause resentment and suspicion of adults. It is up to society to find alternative methods of behavior modification for these children.

Happiness and self-respect must not be denied these children because of their differences. Some ways in which school and society can work together to help accomplish these are outlined. The list includes teaching social skills and self-direction as assiduously as reading and math, providing strong structures for those who lack inner strength, giving immediate reinforcement of approved behavior, focusing on the positive instead of the negative, and encouraging interests outside of the academic sphere where success is likely to occur.

Tolor, A. Incidence of underachievement at the high school level. Journal of Educational Research, 1969, 63, 63-65.

The study reported here was undertaken because of the lack of available data on the incidence of underachievement at the high school level. It was felt that an accurate estimation of the percentage of underachievers was necessary as a first step to the successful development of programs for these students.

The school records of 1,263 sophomore, junior, and senior high school students from an affluent community were examined for this study. An underachiever was operationally defined as a child who has: "(a) at least average current intellectual functioning and (b) a placement on a standard achievement test of at least one standard error of estimate below expectancy, based on his own I.Q." Intelligence was measured by the group administered Otis Quick Scoring Mental Abilities Test (Gamma Test, Form FM). The achievement tests were the National Educational Development Tests (NEDT) which have five subtest areas: English Usage, Mathematics Usage, Social Studies, Reading, Natural Sciences Reading, and Word Usage.

Correlation coefficients between the Otis and the NEDT were computed and regression equations developed. The mean underachievement rate for the entire sample of students was found to be 26 percent. There were some sex differences evident in that 28 percent of the boys were classified as underachieving in comparison to 23 percent of the girls. Mathematics Usage, when employed as an achievement criterion, yields the highest degree of underachievement (29 percent), and Natural Sciences results in the lowest (20 percent). While underachievement as measured by deficiency in all subtest areas of the NEDT is fairly rare, one-third of all students underachieved in two or more areas and three out of five students underachieved in one or more areas.

The author finds this high incidence of underachievement in an affluent community to be most alarming, especially since the 26 percent figure does not include students with below average intelligence. He urges intervention based on an identification of the many causes of underachievement and more systematic analysis and research attention.

Ullmann, C. A. Measures of learning disability for different purposes. Journal of Learning Disabilities, 1971, 4, 186-192.

Definitions and measurement in the field of learning disabilities must be applicable both to scientific systems and to practical decision making. There is a popular preference for intensive, norm-referenced measures such as age scores and grade scores, and popular usage has led to their interpretation as if they were either extensive measures or criterion-referenced measures. The need exists in the field of learning disability to employ measures pragmatically and selectively according to purpose, whether for gaining scientific knowledge or providing programs of service.

As more research leads to clearer definition of the concept of learning disability by each profession, effort must be made to assure that findings are translatable to allied disciplines. Each profession must understand its own frame of reference, as well as that of other disciplines and of those who are responsible for the administration of benefits and services. It is also important to understand the subjective standards used by parents and teachers to decide when a child warrants special concern.

For systematic study, particularly where factors relating to growth are involved, some type of equal interval measure is preferable to measures using intervals of variable size; but for many practical purposes, criterion-referenced behavioral standards are useful, regardless of whether or not the units are equal. As interest in learning disabilities moves to the problems of maturity, it will become necessary to define deficits not only as discrepancy between actual and expected (currently a norm-referenced approach), but also as a difference between actual and required (a criterion-referenced approach). As the child with severe learning disabilities grows up, norm-referenced measures become less useful and criterion-referenced statements gain in significance.

The development of techniques of absolute measurement may provide the advantages of both equal-interval measures and criterion-based standards. Ullmann believes that if this kind of measure can be used in conjunction with a construct of learning as it relates to LD, we may have a basis for developing a comprehensive system of diagnosis and evaluation for multiple purposes.

Vockell, E. L., & Bennett, B. Birth order, sex of siblings, and incidence of learning disabilities. Exceptional Children, 1972, 39, 162-166.

Records of 567 children, who were between the ages of 6 and 16 years and classified as learning disabled, were examined from the files of the Purdue Achievement Center for Children. Data obtained concerned age, sex, I.Q., ordinal position of birth, size of family, and age and sex of siblings. The group consisted of 113 girls and 454 boys. All subjects who were twins, who were adopted, whose parents were divorced, or whose background reflected some other traumatic event were excluded from further analysis. This left 95 girls and 387 boys. I.Q.s ranged from 85 to 140 with a mean of 102.9.

The children came from families ranging in size from one to nine children. The mean number of children per family for girls was 3.50, and 3.33 for the boys. Chi square analysis of the various birth positions within each family size indicate that none of the birth positions are overrepresented at the .05 level of significance.

To examine the influence of the sex of siblings, children from two and three child families were examined in relationship to the number of brothers and sisters in their families. Chi square analyses indicate that none of the sibling constellations are overrepresented within a specific birth position.

These results provide no support for the hypothesis that birth order or sex of siblings are related to the incidence of learning disabilities.

Wilcox, E. Identifying characteristics of the neurologically handicapped adolescent. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

Secondary schools are not ready for students with neurological handicaps. The reasons for this may include the relatively short period of time that professional attention has been directed toward the problem of these adolescents as well as the lack of communication between the individuals responsible for planning and administering programs and those professionals who work with adolescents.

Identification of previously unidentified neurologically handicapped adolescents, or reidentification of those youngsters who are moving up from elementary programs, is crucial if appropriate and realistic programs and goals are to be established. The criteria for identification include: hyperactivity, perceptual-motor impairments, emotional lability, general coordination, deficits, disorders of attention, impulsivity, disorders of speech and hearing, disorders of memory and thinking, specific learning disabilities, equivocal neurological signs, and electroencephalographic irregularities. The author notes these characteristics are not restricted to any one age level but are applicable across all age levels. However, she points out that "the observer. . .will not see the same manifestations (of each characteristic) as would have been seen in the same individual at an earlier age." While the individual characteristics may be found in older or younger children, they are likely to differ in degree and expression.

Responsibility for identification of secondary neurologically handicapped students rests primarily with the counselor who helps the student select and schedule his courses. "Identification should be a continuing process during the first year of junior and senior school." The neurologically handicapped adolescents tend to have a long history of learning difficulties, often with frequent references to learning problems found in the student's cumulative folder. The counselor must help the student to balance his academic program between areas of competence and areas of difficulty so that the student's chances for success--and eventually graduation--are enhanced.

Wissink, J. F. A procedure for the identification of children with learning disabilities. (Doctoral dissertation, University of Arizona) Ann Arbor, Michigan: University Microfilms, 1972. No. 72-31,838.

The purpose of the study was to test the feasibility of a "Bayesian revision of the subjective probabilities" technique in the identification of children with learning disabilities. The Bayesian technique involves a "mathematical means for estimating the probability of the existence of learning disabilities in a child when component disabilities are expressed in conditional probabilities or likelihood estimates."

Procedurally, the investigation involved five major project activities and/or objectives. Ojective One involved a review of the literature in order to establish a list of factors (component disabilities) which were characteristic of learning disabled children (K through grade 12). Objective Two involved the organization of the factors into a systematic framework; a "process" classification was employed which categorized the identified factors under five headings (sensory orientation, memory, reception, expression, integration). Objective Three involved the construction of a questionnaire by which the author intended to solicit the subjective clinical judgements from a group of specialists in the area of learning disabilities in a learning disability (and a non-learning disability) population. Objective Four involved the application of Bayes' Theorem as well as other statistical measures to the returned questionnaires. Objective Five involved a supplementary pilot investigation concerning the interrelationship of the component disabilities.

Of the 100 learning disability specialists polled, 41 did not respond, 19 disqualified themselves or gave reasons for nonparticipation, 40 responded to the first part of the questionnaire, and 26 responded to both parts of the questionnaire. In general, the 40 learning disability respondents agreed about the relative weightings assigned to the component disabilities as demonstrated by coefficients of concordance. Of the 40 factors, the three most discriminating component disabilities were attention deficit, auditory-visual coordination deficit, and visualization deficit indicating that these factors may be particularly important for identification of learning disabled individuals.

Regarding processes, sensory orientation and integration processes contain the most effective identifier variables, reception and expression processes have the least effective identifiers, and the memory process which contained the fewest component disabilities yielded very little useful information.

Chapter II

Educational Programming for the Secondary Learning Disabled Adolescent: Position Papers and Program Descriptions

Arena -- A hand on the present with an eye to the future.

Behan -- A resource-room program at the junior high school level.

Boeser -- A program for students with learning difficulties: Social studies--ten, eleven, and twelve.

Bowe -- Special education curriculum for junior and senior high school.

Butts, Sanders -- Motivated reading: A supervisor's manual for a tutorial reading program. Part 1: Information on operating the program.

Cole -- School habilitation program for secondary students.

Crossover assistance to children with handicaps (C.O.A.C.H.).

Dangel, Erickson, Halton, Molinaro -- An integrated model for individualizing services to children with learning problems.

Fields -- Corrective reading at Hawthorne high school.

Gnospelius -- Selecting media for learning disabled students.

Goodman -- Survey of secondary programs for the learning disabled.

Herbert -- Specific language disability in secondary schools.

Huizinga, Smalligan -- The area learning center -- a regional program for school children with learning disabilities.

Kent Intermediate School District -- Final Report, 1969.

Kline, Kline, Ashbrenner, Calkins -- The treatment of specific dyslexia in a community mental health center.

Kranes -- Training adolescents with learning disabilities to be teacher aides.

Landis, Jones, Kennedy -- Curricular modification for secondary school reading.

Lane, Pollack, Sher -- Remotivation of disruptive adolescents.

Lane -- Educational therapy for adolescent nonreaders.

Lee -- How the public school can help.

Lincoln Community High School, Illinois -- Individualized multisensory approach to learning.

Maine -- An experimental junior high school program.

McDonnell -- Bridging the achievement gap in negative learning adolescents.

Minskoff -- Learning disabled children at the secondary level: Educational programming in perspective.

Neeley -- Cars motivate nonreaders? Of course!

Nolen, Kunzelmann, Haring -- Behavioral modification in a junior high learning disabilities classroom.

Page -- The disabled learner learns.

Page -- Individualizing instructions for adolescents with learning disabilities.

Page, Prentice, Thomas -- Program development of the junior-high school level.

Scheibe, Tolonen -- SERVE and project ISU offer new career options.

Scheier, Senter -- Evaluation of learning 100: An adult basic education project in Bedford-Stuyvesant, 1967-68.

Scott -- Teenage success: A language arts program for the nonacademic student.

Stowe -- A departmentalized high school reading program.

Swanson -- Helping the learning-disabled in a high school setting.

Vescolani -- A basic reading guide for adults.

Vogel -- Teaching teenagers: Integration of nine severe learning disabled children in a junior high school core program.

White -- A junior high school program for the learning disabled.

Whitsell, Whitsell -- Remedial reading in a medical center.

Wiederholt -- A report on secondary school programs for the learning disabled.

Arena, J. A hand on the present with an eye to the future. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

Over the past ten years there has been considerable recognition of the existence of children with learning disabilities. They are coming to be regarded as both a social reality and an educational challenge. However, despite the progress that has been made, many problem areas still exist. Some possible solutions are discussed in this paper.

To begin with, a clear cut definition of specific learning disability is needed at the federal level so that college courses can be standardized. Adequate funding of existing programs is vital if students are to get the individualized attention they require. Better screening techniques are a must, and these should have built into them the methods for proper referral to special classes. The teachers who will work with these students must have a distinct interpretation of the findings of the diagnostician, with recommendations for specific types of activities to be used with each child.

More imaginative programming is needed for secondary school students in special classes. The programs should be built on the basis of meeting individual needs in a group setting; the students should be allowed input into the plans being made for them, and be able to establish their own goals. Programming mustbe aimed at the total child and his basic deficiencies, rather than at the remediation of symptoms. The physical placement of special classes should be handled carefully and with concern for the child, so that he is not made to feel any more "different" than is necessary.

In choosing learning materials for secondary special classes, it is valuable to explore the many new offerings that are being created especially for adolescents, and which are designed to meet the needs of this age group. Parents can be a great source of information and should be included in planning a secondary program. Realistic vocational training, testing, and placement should be an active ingredient of any such program. In order for teachers to be most effective with problem learners, it is important that they receive special training in this field.

Students should be tested and evaluated frequently in order to determine whether or not they are being helped and if special education is still necessary for them. Finally, even after these youngsters finish with their schooling, they need the continued help of community agencies in preparing them to handle a job in the outside world.

Behan, E. F. A resource-room program at the junior high school level. In Successful programming: Many points of view. Proceedings of the Fifth Annual Conference, ACLD, Boston, 1968.

In this paper, a junior high school special education program is detailed. It employed a resource center which served as a spanning program between the self-contained special class and an average homeroom section. The project was planned for children with average or better potential who still needed to receive some part-timehelp following work at lower grade levels with itinerant teachers. The program was put into effect at Edgewood Junior High School, Highland Park, Illinois, and served ten students per year. Most of them were in some type of special education program before.

At the start of the program, the instructor met with every child and his parents, as well as with the regular teachers who were also seeing these children. Time for these special classes had to be taken from study halls, art, music, or gym. However, if a student was extremely low in an academic subject, he was removed from all those periods and given a total curriculum at a lower level. Each child was seen for five hours per week, with a maximum of four or five children in the center at the same time. Wherever possible, two students who were compatible would work together on a task of mutual interest.

The materials used were judged on the basis of whether they were suited to accomplishing their intended purpose, were appropriate to the age and ability level of the child, and were new and appealing to the student. More important than the materials alone was the teacher's ingenuity and ability to adapt them to each student's needs.

The suggestion was presented that it might be possible to plan for a fifth year of high school. The child could take a normal, but lighter than average load each semester which might even enable him to carry his work on a competitive basis in a normal classroom.

Boeser, R., et al. A program for students with learning difficulties: Social studies--ten, eleven, and twelve. Bloomington, Minnesota: Bloomington Public Schools, 1969. (ED 075-442)

A social studies program for grades ten, eleven, and twelve and designed for children with learning difficulties is described in this paper. Students chosen for the course were generally below average in scholastic ability and achievement, in need of individual help and attention, deficient in reading, writing, speaking, and other skills, unable to keep up with the regular class, and suffering from feelings of inferiority due to repeated failures.

It was felt that these children would respond best to a "problems" approach to American history. The basic method was to identify problems in contemporary society, study them, trace their development through history, and then recapitulate in terms of the present situation. A multimedia approach was employed.

The objectives of the course were evaluated by student self-evaluation, teacher-student conferences, teacher observation and evaluation, teacher-made tests, and standardized tests. Use was also made of attitudinal tests, which were felt to be of great importance.

The guide is divided into three sections, each corresponding to a grade level. Each unit of study is divided into problem, activities, and materials. The materials are specially developed for students with learning disabilities. Objectives are listed for each section and activities are briefly suggested for each unit.

Bowe, A. et al. Special education curriculum for junior and senior high school.
Syracuse, New York: Syracuse City School District, 1970. (ED 068-466)

The curriculum which is presented here was developed in order that a combination of materials, information, and skills could be introduced to special education students in preparation for the working world. The first half of the guide presents a curriculum for junior high special education. Topics covered are math, communication skills, social adjustment, personal grooming, the world of work, occupational information, occupational skills, and homemaking. The second half covers senior high. Topics are the same, except for homemaking. Each topic is divided into general objectives, content, activities, and resources (books, records, films, and filmstrips). The appendix includes job application forms. No provision is made for evaluation.

The guide is not to be thought of as representing the entire curriculum, but only as one integrated segment of the total curriculum.

Butts, P., & Sanders, J. Motivated reading: A supervisor's manual for a tutorial reading program. Part 1: Information on operating the program. Madison: University of Wisconsin, Research and Development Center for Cognitive Learning, 1972. (ED 073-445)

This manual contains information on how to conduct a tutorial reading program for upper elementary and junior high school students who are reading on a second or third grade level. Included is a plan for motivating these students using the Stoats "Motivated Learning" reading procedure. Nonprofessionals can learn the methods involved with only brief training, making it ideal for inner city schools where more individualized tutoring is needed.

Part one of the manual presents information on operating the program, including how to arrange instructional schedules, prepare materials, select students, select and train tutors, and supervise the program while in operation. Part two provides the supervisor's materials and a tutor's guide. Along with this there are sample lesson materials, record sheets, tutor materials, and training materials. These may be duplicated for tutor training and student instruction.

Cole, N. School habilitation program for secondary students. Rehabilitation Literature, 1967, 28, 170-176.

A school habilitation program which attempts to offer a meaningful and purposeful curriculum for students who do not have either the incentive or the ability to participate in the regular secondary school program is described in this paper. There are three phases involved--classroom, laboratory, and placement. The program is coordinated by the special education department and the District Office of Vocational Rehabilitation; the staff consists of master teachers within the secondary schools, school rehabilitation specialists, and vocational adjustment coordinators.

In the classroom phase, students learn the basic skills through a practical and individualized approach. All subjects are presented in manners which relate to the students' lives and future occupational options. In addition to basic skills, subjects such as leisure time, humanities, and job preview are covered.

The laboratory phase provides a formalized program of work evaluation and adjustment training in laboratories equipped for that purpose. In the domestic laboratory, students are prepared for occupations such as kitchen helper and janitor's assistant. The industrial laboratory concentrates on jobs such as gardener or welding assistant. Instructional materials such as audiovisual equipment, written contracts, and overhead transparencies are furnished by the materials laboratory. In addition, an individualized program of work adjustment is designed for each student in an effort to remediate any deficiencies in employability.

In the placement phase, students are assigned to actual jobs in the community. Each student receives training on the job during the senior high school years on a half-day basis. Even after graduation, if a student requires further counseling it is available to him.

Throughout the program, parents and students are counseled and extensive work is done with community agencies. Services such as medical and psychiatric evaluations and skilled trade schooling are also available.

Crossover assistance to children with handicaps (C.O.A.C.H.). Personal communication from Central Dauphin School District, Harrisburg, Pa.

The C.O.A.C.H. program is designed to provide academic aid to seventh and eighth grade students unable to cope with the scholastic demands of junior high schools. The students included in the program were those identified as low achievers and/or learning disabled. Low achiever was defined as a student achieving one or more grade level below actual placement. Academic levels were determined by SRA achievement test results. Identification of those students who had specific learning disabilities was done by teachers who were provided a two week in-depth in-service in this topic; the actual definition of learning disabled and screening criteria employed were not stated in the paper.

The experimental program focused on math and social studies. Elementary teachers were selected and trained in theory and methods for working with learning disabled students in these two curriculum areas. Two hallmarks of the program were a philosophy of continuous progress development from the student's own baseline of academic achievement (the unrealistic, and often harmful, standard of performance on grade level was disregarded for these students); and a multimedia instructional approach.

The program's major objectives included: (1) students will demonstrate less frustration with the secondary environment; (2) students will demonstrate increased motivation in working with the usual curriculum content; (3) students will achieve measurably higher scores in basic skills than students in control schools, based on pre and posttesting using SRA achievement batteries, (this will be confined to the math and social studies areas); and (4) students will function with less disruptive behavior than is present in the junior high classroom.

The program brought about many changes in classroom procedures, including a shift from traditional lecture and/or textbook approaches to small group instruction utilizing a variety of instructional approaches, e.g., audiovisuals, manipulatives, simulations, etc. Learning disabled students were referred to the learning therapist normally assigned to the junior high school, and who assisted teachers in coping with the learning problems.

The Central Dauphin School District found the results of the project very encouraging. Discipline problems lessened markedly. Student attitudes toward school improved as perceived by both teachers and parents. Academic gains were registered by a large percentage of the students. The criterion for success was simply a reversal in the trend toward academic deterioration. Therefore, just "holding the line" in math and/or social studies was indicative of positive results; any "gains" were doubly rewarding to the students and project staff. During the project's second year (1973-74) the number of seventh graders who gained academically in math and social studies was 73 percent and 83 percent respectively. For eighth graders, 86 percent and 65 percent of the students improved in math and social studies respectively. In math, 27 percent of the seventh graders and 14 percent of the eighth graders made no gains or lost ground; in social studies, the percentage of students who regressed was 17 percent at the seventh grade level and 35 percent at the eighth grade level.

Dangel, H. L., Erickson, J., Halton C., & Molinaro, A. An integrated model for individualizing services to children with learning problems. A paper presented at the Special Conference on Emerging Models of Special Education for Sparsely Populated Areas, Memphis, Tennessee, December 3, 1971, sponsored by the Council for Exceptional Children, Arlington, Virginia, EC 040678. (ED 057-511)

The authors' service model is based upon an adaptation within the regular classroom structure and operation. The selected regular class is termed as Achievement Development Class (ADC) and enrollment is controlled and limited to 25; twenty nonhandicapped and five handicapped students. The teacher, through in-service, is taught how to deal with the academic needs of learning disabled kids and is thereafter termed a precision teacher (PT). The PT received the prerequisite special training from the learning resource developer (LRD) who will thereafter provide supportive services to the ADC class on an itinerant basis.

The ADC is part of the regular class program. A child is placed in the ADC after he has "identified himself" through his failure to show satisfactory academic progress. Learning problems (not necessarily a diagnosed learning disability) are the criteria for enrollment in the class. If a child continues to fail in the ADC class for whatever reason, psychological services will be requested.

The educational objectives of the ADC class are: (1) increase the time a regular class teacher is able to devote to children having learning problems; (2) increase the amount of individualized attention which is provided to a child with learning problems; (3) reduce the number of referrals for children with learning problems to be placed in special classes; and (4) stimulate achievement gains for children with learning problems in the ADC that are greater than the achievement gains for similar children served in resource rooms and self-contained classes for the secondary learning disabled child.

Fields, I. H. Corrective reading at Hawthorne high school. *Journal of Reading*, 1966, *9*, 182-185.

A developmental reading program for ''problem'' readers is described by Fields. Run through the English department, the program is staffed by two English teachers working along with the school's reading teacher. A proper title for the course is most important in order to avoid the stigma associated with the word ''remedial.'' The program was designed to determine causes of reading disability and try to ameliorate them, attempt to increase interest and motivate students toward better reading and more efficient study methods, and attempt to prepare a follow-up program.

The students chosen were reading two years or more below age groups. IQs were in the above normal range with a lower limit of 90. Students must have had the desire to participate in the program and parents were notified of the child's placement. School personnel involved in the selection process included the classroom teacher, counseling office, psychometrist, nurse, and corrective unit.

The course content is briefly described. The schedule of training and time involved were flexible, and it is recommended that credit be given for the course, either in English or as an elective. Of course, the interest and ability of the teacher, as well as the student's desire to ''make good'' are crucial factors in the program's success.

Gnospelius, A. P. Selecting media for learning disabled students. Audio-visual instruction, 1975, 20, 4, 24-25.

This paper describes project OPEN (Optimal Procedures for Evaluational Needs), one of the few title VI-G secondary programs in the country. It is located in East Junior High School, Brockton, Massachusetts. A major goal of the project is to integrate the learning disabled child into the regular classroom. Remediation is provided for in the resource room, but only on a needs basis.

According to the United States Office of Education, a learning disability is, "a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language . . . . They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. . . ."

In surveying the instructional materials available for learning disabilities, it becomes apparent that the secondary LD student is left out; much of the material is diagnostic rather than remedial; there is no single source of secondary materials; and there is an abundance of print materials in existence.

To compensate for these gaps, OPEN employed a media specialist to select and modify existing materials for use with secondary LD students. Also involved in the selection process were classroom teachers (for content analysis) and the learning disabilities specialist (for the remediation analysis). The media specialist was involved with the modality and technical analysis. All material selections were made by group decision, and the materials had to be available in several forms in order to accommodate different learning styles.

A supplemental selection checklist is presented for selecting print, nonprint, and multisensory materials. The criteria are classified under two headings, "essential" and "desirable." If the material fits the objective, meets the criteria, and the price is right, it can be requested for preview. If the teacher is then satisfied, the purchase can be made.

It is felt that when students with learning disabilities are given materials which fit their learning styles, they will be better able to succeed in the classroom.

Goodman, L. Survey of secondary programs for the learning disabled. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

Program development for the learning disabled has been concentrated, with few exceptions, at the elementary level. Parents and professionals are just now really becoming cognizant of and concerned about the older learning disabled students. We now realize that all learning disabilities cannot be "cured" and that many young learning disabled children will need help all the way through their academic careers. Also, there are many junior and senior high school pupils who never were identified as learning disabled and, consequently, are now experiencing great difficulty in secondary programs. The already identified learning disabled students who are growing up and will soon be coming to our secondary schools, and those students who have never been helped, together represent a population of secondary handicapped students who are going to need special programs.

Experimental and innovative program development at the secondary level has begun. However, it is difficult to gather information on these ongoing projects because they are so new and, as yet, not well publicized, and also because there is no central clearinghouse for information on federally funded projects. Despite these problems, enough programs were studied to generalize about current trends in services for learning disabled adolescents.

The most accepted and widely implemented classroom model for junior and senior high students is the resource room. Self-contained classes are still being established but not nearly as often as resource room operations. Clinical diagnostic teaching is prevalent and, very often, this teaching approach emphasizes remedial instructional programs aimed at the student's deficits. A preoccupation with students weakness, however, may be inappropriate for secondary programs for two reasons. Process identification and training has generally not been of value for elementary learning disabled students, and there is little reason, at present, to suspect that the results will differ for older students. Also, the curricular emphasis for older students should shift from weakness to strengths if we are going to prepare the young man or woman for independent adult living.

In-service figures prominently in many projects. More often than not, in-service deals with the training of teachers, learning specialists, and consultants in diagnostic-prescriptive teaching competencies. The establishment of model centers which offer an array of services for the learning disabled and the development and dissemination of packaged learning units are also prevalent.

The issues of definition, identification, and incidence are crucial because they will affect the scope and depth of our learning disabilities programs. It seems that projects are so involved with practical and programmatic concerns that the underlying philosophical issues are being neglected. Strategies for program evaluation are also a weakness of many project designs. Without adequate evaluation, we may waste considerable time and resourceson unproductive materials, curricula, and teaching approaches. Goodman suggests that special educators become less willing to adopt education innovation which lack evidence of their validity and usefulness.

Comprehensive programming at the secondary level must include both academic and vocational training. Vocational or career education programs will require some alterations and adjustments to bring them in line with the needs of the learning disabled. A wide range of post high school alternatives, including college training, will have to be made available. Career education programs will also have to deal with the learning disabled students' need for continuing literacy training and social and emotional, as well as occupational, learning experiences. Some pr mising vocationally oriented programs for secondary learning disabled students are already underway.

After high school, many students still have learning difficulties, most notably in reading and other language-based skills. Literacy training programs for nonreaders are available through adult basic education programs; the U. S. Army has been involved in literacy training for many years. There are basic similarities in the military and private approaches to literacy training for adults. Both stress basic skill acquisition and use a phonetic approach. The materials used are either commercial materials already familiar to teachers, in the case of adult basic education, or materials made for this purpose. Materials which are child oriented are avoided as these would be offensive to adults. In the army training program, instruction is compressed into a six week training period; in the ABE programs, the amount of training depends upon the wishes of the individual. Though the materials and methods are not new, motivation is high, and the need and relevance of reading ability to daily living is very clear. Basic skills, relevance, and motivation are the key features which make ABE and the Army's AIPT programs successful. The author feels that we ought to keep these ideas in mind for our own secondary programs.

Herbert, J. R. Specific language disability in secondary schools. Bulletin of the Orton Society, 1974, 24, 135-140.

The Specific Language Disability program carried on in Prince George County Schools, Maryland, extended from kindergarten through 12th grade. At the junior and senior high levels, the program approximated a resource room model with the specific language disability teachers working with small groups of students for portions of the school day. Students received daily instruction in basic language skills -- preferably at the very beginning of the school day -- with additional basic skills instruction including reading, writing, and spelling. Additionally, the specific language disability teacher helped students with content area work on a tutorial basis.

Evaluation included psychological and neurological examinations with "...information derived from a writing sample, a spelling test, an informal reading inventory, and careful study of cumulative records."

The Specific Language Disability program at the secondary level was designed for the development of basic skills, the adaptation of curriculum with as little dilution as possible, and the improvement of self-concept.

The remedial approach to language disability began with the letters and sounds of the alphabet. Writing, frequently from dictation, was stressed as such lessons provided "for application of spelling rules, reinforcement of organization and attention to detail, and self-monitoring." Ansara's "reading with a pencil" is another technique that was used. Gillingham and Stillman procedures were applied for instruction of long vowels. Additional teaching strategies for math and content subjects are also presented. The author views these learning disabled students as "learners" and holds appropriate expectations for them.

Huizinga, R. J., & Smalligan, D. H. The area learning center--a regional program for school children with learning disabilities. Journal of Learning Disabilities, 1968, 1, 502-506.

The Area Learning Center is a Title III project, funded by the U. S. Department of Education, that is implementing a multidisciplined approach in dealing with children who have classroom learning problems. The Center accepts referrals only from the local school system. The referral information includes a school questionnaire filled out by the teacher which describes the child's academic progress, observations by the teacher, and the results of any school testing. Also included is a parent questionnaire dealing with the child's early developmental history, home behavior, and parent-child relationship, and release forms for medical and other special agency information.

Upon receipt of the referral, the case is delegated to a Center consultant who will then visit the child in school and conduct some preliminary testing. If the consultant feels that enough is known about the child and his environment, an effective program for learning in the classroom is developed with the help of teacher and principal. However, if it is felt that further diagnostic testing is necessary, the child is scheduled into the Area Learning Center for further assessment. Assessment is possible in four areas: intellectual, perceptual, academic, and personality. The Center's staff is comprised of: reading experts, psychologists, and a corps of psychiatric, pediatric, and academic professionals.

After testing and observation are concluded, a conference is held with Center personnel and appropriate school personnel. The resulting plan for action (prescription) is a composite of the thinking of all persons involved and is implemented by the school personnel with the continuing assistance of the Center consultant.

Some conclusions and observations after the first year of operation are that: (1) of the 620 referrals, 45 percent had been retained during their school experience; (2) 79 percent of referrals were boys; (3) numerous health problems were detected and aided; (4) the interdisciplinary team approach coordinates services of many organizations and avoids duplication of efforts; (5) the majority of children have shown progress after work with the Center; (6) the Center is well accepted by parents and school personnel; (7) the teacher and principal are becoming more aware of the learning problems of children.

Kent Intermediate School District. The area learning center, Grand Rapids, Michigan, Final Report, 1969. (ED 037-844)

The final report of three years of activities in the Area Learning Center of the Kent (Michigan) Intermediate School District is presented in this paper. The center provides service for children with learning difficulties and in-service training designed to translate learning theory into practice for teachers. The center covers a seven county area and brings together, to function as a team, a staff of specialists in psychology, curriculum, child growth and development, learning theory, and language arts.

The objectives of the program were to provide supplementary services for learning disabled children through an interdisciplinary approach; to provide prescriptive teaching (including diagnosis, prescription, implementation, evaluation, and rediagnosis); to provide personnel and materials to help the classroom teacher implement prescriptive teaching; and to provide in-service educational programs. The center published a comprehensive catalog of materials, tests, and books, all of which were available to the classroom teacher for use with special children.

The results of this three year experiment were very positive. The covering of a large geographic area proved to be an economical as well as effective way to service large numbers of students. The team approach to diagnosis and prescriptive teaching was found to be of great value both to the students and to the team members who learned from each other. Since the classroom teacher was included as a team member, there was no feeling that the methods she was asked to employ were imposed upon her, but rather that she had a hand in determining what they would be. Paraprofessionals are employed so that the professionals could use their time most effectively, and this proved to be a very successful part of the project.

It was concluded that this program was highly successful, and that the team approach to diagnosis and prescriptive teaching is a direction for education in the future.

Kline, C. L., Kline, C. L., Ashbrenner, M., & Calkins, S. The treatment of specific dyslexia in a community mental health center. Journal of Learning Disabilities, 1968, 1, 456-466.

A program for the diagnosis and treatment of specific dyslexia was established in the Marathon County, Wisconsin, Child Guidance Clinic. This paper discusses the first year of operation of the clinic.

Fifty children, between the ages of six and 17, completed dyslexia therapy (16 girls and 34 boys). Each child had received a comprehensive diagnostic evaluation upon application to the clinic. A multisensory approach of instruction was utilized, with children being seen in one hour individual sessions, four or five times a week.

The results of these fifty cases are discussed in this paper in terms of a Dyslexia Quotient, a method of computing the extent of reading disability (or ability) in a given child, irrespective of age, grade level, or intraschool factors. The authors illustrate the formula used to compute the Dyslexia Quotient and discuss the standardized tests utilized.

After one year of treatment, 46 of the 50 patients improved significantly, three cases were unchanged, and one showed a slight decrease in reading ability relative to grade level. The children under ten years of age made more progress than those older than ten. Emotional symptoms present in 43 of these 50 patients are discussed.

One of the important features of this program has been the demonstrated effectiveness of the use of lay therapists. Carefully selected therapists were able to function effectively with a minimum of training and supervision.

This study demonstrates that early diagnosis and treatment are directly related to successful outcome. Therapeutic results in this program were, according to the authors, excellent both in the alleviation of the reading problem and in the amelioration of emotional problems.

Kranes, J. E. Training adolescents with learning disabilities to be teacher aides. In Management of the child with learning disabilities. Proceedings of the Fourth Annual Conference, ACLD, New York, 1967.

The program reported was an attempt to train two adolescents as teacher aids in nursery schools serving children ages two and one-half through five. The Education, Training, and Research Program for Adolescent Underachievers was established by New York University. There were nine adolescents in the program as reported by Kranes. They were ages 18 to 20, with I.Q.'s from 64 to 95, and with an average academic achievement of fifth grade. The theory behind this program was that in the setting where the nursery school child must begin to be more highly social, where his intellect unfolds almost from its beginning stages as he learns to solve problems and where reason and discipline are a way of life, the aids would expand their own thinking as they learned to perform and at the same time reconstruct their own lives.

The aids participated in two types of sessions: an individual tutorial session of one hour weekly which offered them time to discuss the problems that develop in nursery school placements; and a two hour weekly child study seminar which provided for orientation in the nursery schools as well as specific training. There were usually two weekly written assignments, one bearing directly on the aids' problems and questions about their placements, the other dealing with abstract educational principles.

The aids' teachers reports indicated surprise and pleasure at the level of functioning of these students and the large amount of progress and emotional growth noted. Kranes concluded this program to be a success.

Landis, J., Jones, R. W., & Kennedy, L. D. Curricular modification for secondary school reading. Journal of Reading, 1973, 16, 374-378.

The article deals with a secondary level reading program for poor (learning disabled according to the authors) readers. The reading program (developed under Title III funding) was designed to meet both the "subject matter needs and remedial needs of the learning disabled student." The dual responsibility for remedial instruction in basic problems was, to the authors' point of view, an excessive and unrealistic burden for the secondary school reading specialist.

A multisensory learning approach was substituted for the textbook oriented instructional mode in the content subjects (English I, Mathematics I, and Science I). The content area teachers subsequently had to structure course content in terms of behavioral objectives and prepare appropriate auditory, visual, and/or kinesthetic learning aids and materials to facilitate the student's learning of content and skills.

A basic remedial reading program paralleled the new instructional program where students, removed from the demands and pressures of the content reading situation, were able to profit from reading instruction in basic skills. The scope of the reading program included instruction in word recognition, comprehension, and study skills.

The project required the services of a reading specialist who, in addition to her regular duties, performed the following tasks that related to and were necessary for the total multisensory instructional approach: (1) wrote behavioral objectives in basic reading skills; (2) developed multisensory teaching aids for teaching basic reading skills; (3) identified high interest, low vocabulary materials; (4) worked with regular teachers to coordinate remedial instruction with content area instruction; (5) developed parent counseling procedures; and (6) informally evaluated student attitudes toward reading.

As a result of their participation, students enrolled in the program were passing their academic courses. The authors note that the courses were not "watered down" and differed in method of presentation, not content. Student self-concepts improved, apparently success in content subjects sparked a renewed interest in and motivation for reading. Interestingly, many of the students in the program were disabled with respect to the reading requirements of their content courses but were able to read, at a considerably higher level with good comprehension, nonschool and noncontent materials. The authors observed that elementary school techniques turned these kids off and suggested that reading drills should be kept to a minimum while innovative approaches are tried out.

In summary, success in content subjects provided the impetus for remedial reading and general reading as well.

Lane, D., Pollack, C., & Sher, N. Remotivation of disruptive adolescents. Journal of Reading, 1972, 15, 351-354.

At Maimonides Community Health Center in Brooklyn, a demonstration model of a cross-age helping program was instituted. Eight adolescent boys were chosen by their teachers from the eighth and ninth grades on the basis of extreme acting-out behavior on the Burk's Behavior Rating Scale. The boys were of multiethnic backgrounds and they all met the requirement that they be non-truants. Although they were all reading below grade level, they were trained in the use of the Intersensory Reading Program, and assigned to tutor a very poor reading third or fourth grade boy who had been referred to the center for learning and behavior problems. Supervised by a college student, they tutored the younger students twice a week on a one-to-one basis for seven months.

"Rap sessions" were held every other week for the tutors. Behavior modification procedures and modeling techniques were employed at these sessions in an effort to improve behavior and heighten the self-image of the adolescents. After adequate rapport was established, discussions and role playing were used to direct changing of maladaptive behavior. Motivational concepts applicable to school achievement were modeled by two psychologists serving as group leaders; they encouraged the students to attempt new styles of behavior.

This was a demonstration study and not subject to rigorous statistical analysis. Pre and post mean reading scores on the Metropolitan Achievement Test showed a 14 month reading gain by the younger children, a 19 month reading gain by the tutors.

Evaluation of the adolescents' behavior at the completion of the project by the guidance counselors and teachers who had initially rated them, showed a significant decrease in disruptive behavior. The adolescents' own evaluation indicated that they had profited from the program; they felt more confident about their own abilities, less angry, and more responsible.

Lane, P. R. Educational therapy for adolescent nonreaders. Academic Therapy, 1970, 6, 155-159.

The article recounts a small scale remedial reading program for adolescent nonreaders. The author, drawing from the work of Dr. Cecelia Pollack, Director of Learning Rehabilitation Services at Maimonides Medical Center, initiated a remedial reading program in 1969 at the Montauk Junior High School under the auspices of the Maimonides Community Center.

Eleven nonreading seventh and eighth grade youngsters participated. All were disadvantaged, all had repeated a grade at least once, some more. Eight of the eleven exhibited severe behavioral problems in the school.

The Intersensory Reading Method developed by Dr. Pollack was utilized in this program. This featured "a gradual progression of phonic skills with strong reinforcements of learning, major use of linguistic work patterns, and a minimizing of contradiction in sounds of letters."

After four months, nine of the boys showed marked improvement in reading. Average reading improvement for the group was 12 months (after four months of instruction) with some gains as great as two years and five months. Only two boys did not improve significantly and for them testing revealed severe learning disabilities. Among the nine who made good progress, seven had visual-perceptual, visual-motor, or auditory-motor problems.

Behavioral improvement was particularly good. Truancy was cut in half. Disruptive behavior diminished; general classroom deportment, attention, and reading ability improved greatly.

Lee, W. How the public school can help. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

In this article, Lee presents the idea that programs for learning disability students on the secondary level often don't take into account the fact that many of these students have exceptionally high ability, and many have only limited neurological involvement. He points out that (1) learning depends on the interaction of a number of variables; (2) the best present-day techniques for diagnosing neurological difficulties are still inadequate; and (3) for secondary students, the original block in learning development has been overlaid with a great number of complicating difficulties and adjustments in the school setting.

School programs based on the control of students' behavior rather than on an individual needs analysis, inhibit motivation and do not allow for the fulfillment of many of their basic needs. It is felt that for a school program to be of maximum benefit, it must be based on a positive philosophy of how students can best help themselves to achieve their own goals.

The objectives of a program for the educationally handicapped must be stated in specific terms in order to allow for evaluation and improvement based upon data feedback. Objectives should also be related to those of the school system, be realistic, be applicable to all academic levels, and be within the professional scope of the staff involved. The special education staff should be able to reach, as well as have an impact on, the total enrollment of the program. A statement of objectives represents a value judgement and this judgement should be based on a well-developed program philosophy.

Some pitfalls to be avoided in developing a program, Lee states, are focusing on the past instead of the present and future, focusing on failure instead of success, and focusing on the needs of the system instead of those of the youngster.

Lee believes that the student should be an active partner with both his teacher and counselor in the development of goals for himself, and these goals should be based on present abilities and an analysis of individual needs. The program should be so structured that it is not possible for a student to fail. If a grading system is adopted, only A, B, or Incomplete should be used. Central to such a program would be an emphasis on positive reinforcement. Punishment has no place in a learning disabilities curriculum. The element of curiosity is a strong motivating factor and must be considered when developing a program; imagination and innovation will turn the student back on to education.

Parent involvement is another important factor to be included. Parent counseling programs can be effective in establishing early parent-school contact and liaison, providing parents with important information related to their child's learning and development, and helping parents to understand themselves.

Since there is often much ambiguity involved in a special education program, the teachers involved should learn to expect it; they also need a high degree of social sensitivity, behavioral flexibility, and well-developed communication skills. It would also be helpful if they are innovative and creative. A need exists for well organized and developed training programs for teachers of secondary special education programs, and, hopefully these will be offered by more colleges in the near future.

Concluding, Lee feels that a most important part of developing a program is the process of evaluation. The planning of this evaluation should be initiated with the establishment of the program and should detail specific goals that can be measured and analyzed by appropriate criteria. Only in this way can the special education program in a school improve and grow. Only then will the needs of its students be met.

Lincoln Community High School, Illinois. Individualized multisensory approach to learning. Report from a Title III ESEA Project, 1972. (ED 064-835)

The project described was designed to meet the needs of potential high school dropouts exhibiting learning disorders. A multisensory approach to learning was employed in an effort to help these students acquire necessary levels of competence in English, mathematics, and science. It was hoped that success in these academic areas, would encourage these students to continue in school and complete a vocationally relevant curriculum. The project was based on the Elementary and Secondary Education Act, Title III.

A variety of audio, visual, and kinesthetic instructional modalities were employed in an attempt to make learning more meaningful and less frustrating for the learning disabled youngsters. The multisensory approach was based on the General Model of Instruction (GMI), which is a procedural guide for designing and conducting instruction, and on an Instructional Management Strategy (IMS), which includes procedures for large group instruction, small group instruction, laboratory instruction, and independent study.

Program source guides are explained in the paper. These took the place of textbooks and contained the basic information required for each course. They included instructional objectives, proficiency pretests, learning activities, self-tests, formative evaluation, and questing activities.

The role and responsibilities of the project teacher was discussed in the report and some sample forms are included. The reading, English, science, and math programs are also described. The program is evaluated in great detail, and the procedure used is also given.

Maine, H. G. An experimental junior high school program. In Successful programming: Many points of view. Proceedings of the Fifth Annual Conference, ACLD, Boston, 1968.

This paper considers the question of whether or not a child with learning disabilities can be helped when he has already reached junior high school. Such a child has been promoted through the elementary grades even though he has been recognized as an underachiever.

The junior high school program described was initiated in New York in 1967. It involved a group approach to learning, based on many techniques used in the Orton-Gillingham method: a multisensory approach. During every school day, five special classes (four English, one math) were conducted, usually replacing the regular classes in those subjects. Twelve to fifteen students were seen each hour. Teachers made regular use of the sound pack (phonograms) and the booklet "A Guide to Teaching Phonics." Kinesthetic trace boards were designed for every desk.

The project used control groups and experimental groups. All the students initially received selected portions of the Purdue Perceptual Motor Survey, but only two of the English classes received perceptual-motor training. The single mathematics class also received perceptual-motor training but had no parallel control group due to program limitations. All experimental groups received one hour per week of calisthenics and trampoline exercises designed especially for the program. Emphasis was on improvement of overall body coordination, rhythm, and balance.

Students chosen for the special classes were achieving well below suspected potential in either reading or math. Spelling test scores and written Stanford Word Meaning grade scores were at least two years below grade level. Many students had varying degrees of neurological deficits. Participation was voluntary and they must have had parental approval. The only candidates eliminated were those whose emotional adjustment was decidedly a factor.

At the time this paper was written, the program had not been in effect long enough to evaluate it, other than to point out that no student had dropped out, even though they are all free to do so. Expansion of the program was planned and a senior high project was being developed as well.

McDonnell, K. Bridging the achievement gap in negative learning adolescents. In J. Arena, (Ed.), The child with learning disabilities: His right to learn. Proceedings of the Eighth Annual Conference, ACLD, Chicago, 1971.

This paper describes a program for learning disability students at Hopkins Junior High School, San Jose, California. The study involved twenty five children, ages 12 to 16, who attended the clinic at Hopkins for one to three hours per day. They were selected by school psychologists from local junior and senior high schools. Twenty one boys and four girls were involved in the study, many of whom had a history of behavioral problems. The staff consisted of two full-time certified teachers.

Initially, the student and his parents were interviewed and the program explained to them. Then the child was evaluated, his learning problems explored, and an individualized program of remediation established for him. He was encouraged to evaluate his own performance and discouraged from feeling sorry for himself. Emphasis was placed on developing a sense of humor. Group discussion of problems was employed and freedom of movement within the classroom was permitted.

A point system was used to reward students both for work performed and for acceptable behavior patterns. Each point was equal to one minute of free time, redeemable at the end of the week. This time might be spent in playing a game or getting some individualized help on a class project or test. All children were encouraged to help each other.

At the end of the seven month study, gains were seen in the academic levels of the students as well as in their motivation, willingness to try, study habits, behavior, and ability to get along with other children. This improvement carried over into their performance in regular school classes. Perhaps the greatest gain for the students was their enhanced self-image and the reversal of a negative learning cycle.

Minskoff, J. G. Learning disabled children at the secondary level: Educational programming in perspective. In J. Arena, (Ed.), The child with learning disabilities: His right to learn. Proceedings of the Eighth Annual Conference, ACLD, Chicago, 1971.

Traditionally, special education has focused on the middle range of children with learning disabilities. When these children go on to junior or senior high school, special education services are often discontinued or the children are channeled into inappropriate classes. Minskoff believes that we must now create specific programs for learning disabled children at the secondary level. The author suggests three curricula that might benefit many children with learning disabilities.

The first curriculum is called Sheltered Workshop Approach. This would benefit children who are severely learning disabled and emotionally disturbed and/or those who have a severe disability in social functioning. These two types of children need a highly structured, but more simplified and less stressful environment. Training in social learning that is related to a job and general functioning in the adult world would be given, as well as training for specific types of jobs.

The second curriculum is Vocational Education. Children receiving training in this group would be of average intelligence and do not have potential for college. These students do not have social problems. However, they might have learning disabilities in perceptual or academic areas. The essence of this curriculum is to fit each child's learning characteristics to specific types of jobs and functions; the child would be trained for jobs that interest him and that would use his strengths and aptitudes.

The third curriculum is Precollege. These children would be intellectually superior, yet, have learning disabilities. The curriculum would be the regular precollege course, with areas of weakness taken into consideration and circumvented.

In order to determine which curriculum fits each child, it is necessary to determine a child's pattern of strengths and weaknesses in such areas as social integration, language, reading, problem solving, perception, motor skills, and arithmetic.

There may not be time to both remediate a secondary school child's learning disability and build in the necessary skills and knowledge which he needs in order to function after he leaves school. The author, therefore, recommends that when faced with the choice of concentrating on remediation of learning disabilities or direct input of knowledge through intact areas, it is necessary to choose the latter as the major point of emphasis in a secondary curriculum.

Neeley, E. Cars motivate nonreaders? Of course! Teaching Exceptional Children, 1972, 4, 142-144.

This is a report concerning three sixteen-year-old nonreading boys in a special education class, who learned to read a simplified driver's manual because they were so highly motivated to learn to drive. The special education teacher bought road maps and miniature cards for them to work with, and rewrote the driver's manual to the boys' reading level. The students themselves made all kinds of highway signs and practiced the rules of the road using the toys and the signs as well as charts they had made to illustrate the laws in the manual. They also spent a day in traffic court to learn first hand about some of the dangers involved in driving.

After five months of study the boys spent another month providing mock traffic courts and demonstrations for their class. During the whole process, they were reading, using a dictionary, and computing more math than they thought they knew. The experience gave these students confidence in their abilities; they knew that they could learn if they only applied themselves. Their fathers taught them the mechanics of driving, and in several months, at least one of the boys had passed his driver's test and had gotten a job as a truck driver.

Nolen, P. A., Kunzelmann, H. P., & Haring, N. G. Behavioral modification in a junior high learning disabilities classroom. Exceptional Children, 1967, 34, 163-168.

This study was conducted at the University of Washington Experimental Education Unit, which was organized to provide for the study, assessment, and remediation of educational retardation. Because the Experimental Education Unit has diverse research responsibilities and because it provides services for teacher training as well as services for exceptional children, the behavioral deviances of children involved span a wider range than is normally found within the special education classrooms.

The data reported here were taken from the junior high school classroom during its first year of operation. Subjects were eight students, between twelve to sixteen years of age, admitted to the unit on the basis of having serious learning and behavior disorders. Individual programs were arranged for each child in the classroom.

Although the stimulus program (an attempt to define and arrange academic responses) played an important role in the organization of an operant classroom, reinforcement contingencies were the major concern. Two principles guided the exploration of reinforcement contingencies in the unit's classrooms: (1) "high probability behavior" -- this behavior occurs at a high rate prior to educational or clinical intervention, it consists of those things the student most often chooses to do, providing a source for "natural" consequences for the manipulation and acceleration of low probability behavior; and (2) that both high probability behavior and any other consequences assumed to be "secondary reinforcers" were ultimately acceptable in a traditionally organized classroom.

In an attempt to standardize the number of stimuli presupposed to be the "natural" consequences of high strength behavior, the teacher allotted points for the child's successful completion of each of a number of gradually lengthening academic tasks. The junior high students most preferred choices for contingent high strength behavior centered on handicrafts, typing, woodworking, organized games, or science units. These choices were surprising to the teaching staff, who had made an effort to supply what are considered culturally determined "reinforcers" on the assumption that such choices would be replaced only by gradually shaping preferences for the more traditional school activities.

Page, W. The disabled learner learns. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

A junior high school program for learning disabled students conducted by the Central Midwestern Regional Education Laboratory is discussed in this paper. The planners of the program felt that (1) the child should be removed from the regular classroom, (2) a basis for success in academic learning had to be provided, and (3) the child's perceptual and language deficits had to be remediated.

Students were selected either from the recommendations of their sixth grade teachers or because they scored a year or more below grade level on the reading and arithmetic sections of the Iowa Test of Basic Skills. An elaborate screening and testing program proved to be of no value to the teacher in the actual operation of the classroom.

The primary purpose of the project was to establish a comprehensive remedial and developmental program to enable seventh and eighth graders to profit more fully from their junior high school learning experiences. One of the first steps undertaken was the strengthening of the student's self-image through a program of individualized prescriptive teaching, where responsibility for learning was shifted to the child. A perceptual training laboratory facility was provided to investigate self-learning and practical experience.

Three types of materials were originated and adapted: remedial perceptual materials, high interest materials for low level activities, and materials for the regular classroom designed to increase the perceptual abilities of all pupils.

Another objective was to effect attitudinal changes toward disabled learners among teachers, administrators, pupils, parents, and the public. It was believed that children will always choose positive rather than negative goals for themselves and the teachers concentrated upon these goals. It was also felt that there are certain skills and knowledge essential to each child and it must be the objective of the teacher to teach all of this material, to all of the students, with 100 percent proficiency.

The child was to establish a tutorial relationship with each child based on the child's understanding of his goals. The child must be helped to determine a goal that is both worthwhile for him and in conformity with the school's goals. It is important that the teacher be sensitive to the student's needs and tolerant of behavior, as well as flexible in approach and use of materials.

Two hours of each school day were used for physical education, music, art, industrial arts, and homemaking. The remaining four hours were devoted to academic subjects; the length of time spent on each depended upon each child's needs. The classroom was self-contained and partitioned into sections. Two copies of as many kinds of learning devices as possible were kept in the classroom.

Children made their own worksheets and tests. Once they accepted the philosophy that the purpose of the school is to learn--not to impress the teacher or get a good grade--they sought help from whatever source was most efficient and convenient. Children also became tutors for lower-grade students.

An analysis of the program, conducted by a research team, indicated that this type of learning experience proved to be very beneficial to the students involved. The author feels strongly that the junior high school years are a most important time for students with learning problems, and special education at this point in their lives is critical for future academic success.

Page, W. R. Individualizing instructions for adolescents with learning disabilities. In J. Arena, (Ed.), Meeting the total needs of learning disabled children: A forward look. Proceedings of the Seventh Annual Conference, ACLD, Philadelphia, 1970.

The Kennedy Child Study Center in Nashville, Tennessee was involved in a research project known as Project ENABLE. The remedial procedure found to be most beneficial for adolescents with learning disabilities in this project was a tutoring program in which the disabled learner became the tutor rather than the tutored. The role reversal gave the tutor some genuine prestige and perspective. It helped show the child that learning is a process that takes place when one determines the appropriate steps that must be taken, then is willing to go through those steps, and get help when needed.

The tutoring did not have to take place in the student's area of weakness or at the specific level at which he was deficient. It could range from helping a first grader learn to tie his shoes to actually teaching concepts. The student was trained to prepare lesson plans and organize his materials. An especially practical remedial procedure was that of having the children make their own materials, often upgrading or adapting materials designed for lower grades to the junior high level. First and second grade activity books often were used for ideas. Some students made up plays and skits; some created oversize rulers, thermometers, and charts as classroom aids.

In the author's view,the most valuable aspects of the project were that the kids became involved in active, creative, and cooperative roles; and, that the teacher was required to explain the purpose of each activity so that the child was able to teach it to others.

Page, W. R., Prentice, J. J., & Thomas, D. N. Program development at the junior-high school level. In J. Arena (Ed.), Management of the child with learning disabilities: An interdisciplinary challenge. Proceedings of the Fourth Annual Conference, ACLD, New York, 1967.

An experimental program was established at Brittany Junior High School, University City, Missouri in 1966 in order to deal more effectively with underachieving students with severe perceptual deficiencies. It was hoped that the program would provide remediation for these perceptual problems and restructure the school experience in an effort to provide a pattern of success. At the time, no studies could be found which dealt with underachievers at the junior high level, so information on learning problems at the elementary level was evaluated, and the findings extended upward.

Screening of students included administration of the California Achievement Test, the Henmon-Nelson Intelligence Test, the Peabody Picture Vocabulary Test, the Detroit Tests of Learning Aptitude, and the Wide Range Achievement Test. In addition, a draw-a-person test, an autobiography, and an incomplete sentence test were included to measure self-esteem and attitudes toward school, family, peer group, etc. Teacher evaluations were also considered in the selection process.

The experimental group which was finally chosen consisted of thirty students (eighteen boys and twelve girls) representing the lowest achievers having the highest incidence of perceptual deficits on the test battery. They were removed from their regular classes (and the competition and frustration which accompanied attendance in them). A tutoring program was instituted where the learning disability students became tutors to younger children. The youngsters devised many of their own teaching materials and each received much needed individual attention.

Areas in which specific procedures were developed were: open communication between student and teacher in gripe sessions, improved techniques for devising individualized instruction, effective parent involvement, and increased student responsibility for one another's learning and success. It was found that students were greatly motivated to learn due to the tutorial experience and to the individualized instruction they received.

Scheibe, J. & Tolonen, H. SERVE and project ISU offer new career options. Teaching Exceptional Children, 1973, 5, 142-145.

Project SERVE (Special Education Rehabilitation and Vocational Education interagency involvement) is now the Minnesota state plan for secondary work study programs. It was instituted in 1970 and involves representatives from the Minnesota State Department and local educators from special education, rehabilitation, vocational education, and administration. One person, the teacher coordinator, is responsible for both the work and classroom phases of the program.

As a result of this new concept, new curriculum materials were needed and Project ISU (Individualized Study Units) was originated. It provides EMR, TMR, learning disabled, and behavior problem students with learning materials which pertain to their everyday practical needs. The method used to teach these skills is the Unipac, a self-contained set of teaching materials designed to teach a single concept and set up for independent and individual use.

The student is first told the nature of the particular skill in his Unipac and why it is important for him to learn it. He is also told exactly what he must be able to do and how he will be evaluated. A pretest is given to determine which skills, if any, have already been mastered for that particular Unipac. The lessons, wherever possible, are a "learning-by-doing" experience using films or videotapes to make the learning more meaningful. The student then administers a self-test to see how well he is doing, and if he is reading he goes on to the posttest. Success on this may lead to more advanced questing activities if the student has the desire to expand his knowledge, but this is an optional activity.

The authors believe that students are really motivated by learning activities that can be applied in real life situations, and that a set of Unipacs which are specially geared for students in the special education program are a most valuable tool in their secondary work study program.

Scheier, E., & Senter, D. R. Evaluation of learning 100: An adult basic education project in Bedford-Stuyvesant, 1967-68. Huntington, N. Y.: Educational Developmental Labs, 1969. (ED 044-551)

This study compared the effectiveness of Learning 100 (L-100) with that of a conventional reading program in the Bedford-Stuyvesant section of Brooklyn in 1967-68. L-100 is a multimedia, multimodal, multilevel communication skills system designed for use with undereducated adults, out-of-school youths, and potential dropouts. There were 49 students in the experimental group and 47 in the control group. The control students were involved in an ongoing youth in action stipend work training program of which the adult basic education program was a component.

Both groups met for nine hours per week. All students were given the Metropolitan Achievement Test, Reading Intermediate Level, after 10 hours of instruction, and repeated after 100 and 200 hours. To the extent that the sample was representative of the population from which it was drawn, and that the teacher questionnaires, interviews, and testing instruments were valid for this population, it appears thatthe L-100 group showed a significant difference in achievement above that of the control group.

It was concluded that the interest of the undereducated adult appears to be maintained when the adult oriented content of L-100 was combined with instrument usage. The structure permitted each student to start at the appropriate point for his needs and to progress at his own rate. In addition, involvement with this method appears to have increased self-confidence, reactivated interest in learning, raised economic potential, and caused students to become more interested in their children's school work. The authors feel that the L-100 system can be successfully handled by teachers who have had little previous experience with educational technology.

Scott, L. T. Teenage success: A language arts program for the nonacademic student. Florence, South Carolina: Florence Public Schools, 1970. (ED 043-466)

The paper describes a secondary language arts program for nonacademic teenagers; nonacademic is defined by the author as "those who find academic achievement difficult and who are not primarily interested in furthering their education beyond high school." The term nonacademic is used in contrast to the academic high school programs. Learning disabled students, if not segregated into special classes, would be included in the nonacademic group.

The program was initiated in the secondary schools of Florence, South Carolina. The program had been preceded by a remedial reading program of many years standing which, unfortunately, had not produced the hoped for results.

In the experimental language arts program, English and reading were intertwined, emphasizing the interrelationship of the different language modes (listening, speaking, reading, and writing). The instructional program was structured on the basis of reading difficulty rather than grade level. A wide variety of materials, methods, and approaches were employed. Interaction with students stressed enhancement of self-esteem and the improvement of self-concept.

The goals of the reading program varied according to individual needs and was divided into three phases: developmental reading and literature, skill building, and leisure reading.

The 1968-69 program was evaluated in terms of improved vocabulary and comprehension scores on the Gates-MacGinitie Reading Tests (for junior high). All schools made significant gains in comprehension. All but two schools also made significant gains in vocabulary. A number of gains were demonstrated in English usage (written). At the senior high level, comparison of experimental and control Ss (on some measures used for junior high students) revealed gains in comprehension and writing. Results warranted expansion and continuation of the program.

Stowe, E. A departmentalized high school reading program. Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education, 1971. Report RE 003 861. (ED 055-750)

In an attempt to meet the needs of high school students (sophomores and juniors) enrolled in terminal classes, the Sacramento City Unified School District revamped its low track English program. Terminal classes typically contained students with very poor academic records (reading was severely retarded in many students, functional reading levels among the students varied from nonreader to seventh grade) whose academic career would not extend beyond high school.

Classrooms were set aside to accommodate the new program. The rooms were refurbished (named English Laboratories) and stocked with a wealth of reading materials and mechanical learning aids. Materials selected for use represented a wide range of reading interests: reading and spelling laboratories; high interest, low readability materials; spellers; short stories; dramas; science books; occupational oriented stories (fiction and nonfiction); biographies; encyclopedias; and dictionaries.

The objectives of the program were that students would (1) realize the importance and the need for the development of the basic skills of reading, speaking, listening, writing, and spelling; (2) develop positive attitudes toward self and future; (3) learn to express an idea in writing; (4) develop the desire to stay in school; (5) gain an understanding of literature and find pleasure in reading stories; (6) gain insights for personal growth from reading good literature; and (7) develop skills and attitudes to help make him employable.

A crucial aspect of the program involved the need for an in-service program to help English teachers recognize the need to teach reading in the secondary schools. (Reading instruction coupled with specific content in the different subject areas is an important factor in the success of a secondary level learning disability program, according to the author.)

Diagnosis of reading included functional levels, specific abilities and disabilities, and an inventory of the student's interests. The Metropolitan Achievement Test was used on a pre-post basis for diagnosis and prescription; the Gilmore Oral Reading Tests were also used. Teaching was facilitated by the development of teaching study guides and student's materials kits.

The greatest strength of the program according to Stowe, lay in the increased motivation and interest of the students; the greatest weakness was the lack of teacher training in teaching reading.

Swanson, S. Helping the learning-disabled in a high school setting. In Successful programming: Many points of view. Proceedings of the Fifth Annual Conference, ACLD, Boston, 1968.

Swanson's paper deals with a learning disabilities program in an Illinois high school. The students chosen for participation were those who had been in a junior high school learning disabilities program, as well as some who came from private schools and who had a previous neurological and psychological evaluation. The program was planned as a resource unit where the students could go for certain periods during the day. Students came during their study hall periods and did not miss regular classes.

All students were integrated as much as possible into regular classes based on their abilities, interests, and needs. Decisions about which courses to take were left in the hands of the students themselves, with guidance available from the counseling staff.

Classroom teachers were informed about the special program and told which of their students would be involved. Many of these teachers were only familiar with special education classes in reference to EMH children, and were not familiar with learning disabilities or how they affected day-to-day functioning. After being briefed, the teachers joined a team effort with the learning disabilities teacher and the counselor in an attempt to provide the maximum benefit to the students in the program.

Audiovisual aids were relied upon as teaching tools. Typewriters were available and programmed instruction workbooks in math and spelling were found to be helpful. Materials incorporating the initial teaching alphabet approach to reading were utilized, augmented by an extensive use of tapes and auditory memory drills. Many materials had to be individualized for each student.

Meetings were arranged with the parents to familiarize them with the nature and the goals of the program; conferences were held as often as necessary, and their suggestions were encouraged. Discussion groups were held to provide information about adolescent dynamics as well as about learning disabilities.

It was felt that there was a definite need for vocational and occupational guidance and counseling in the high school program since many of the children might not be able to go on to college. At the time this study was written, such programs were beginning to be introduced into the curriculum.

Vescolani, M. et al. A basic reading guide for adults. Fayetteville: University of Arkansas, 1971, sponsored by USOE, Department of Health, Education and Welfare. (ED 065-777)

Vescolani offers a curriculum designed for the Adult Basic Education Program at the University of Arkansas. The primary criterion for a materials and methods selection was adaptability to a job oriented educational approach. The curriculum guide is organized into five sections: (1) introduction--purpose, rationale, individualizing; (2) definition of reading--"a connotative interpretation"; (3) developmental reading--recognition patterns and techniques, comprehension; (4) evaluation; and (5) sequence of reading instruction.

The program at the University of Arkansas is aimed at students who are deficient in even the most basic decoding skills. The author notes a pattern of initial unusual success, with attendance problems frequently complicating later progress. She suggests, however, that adults in the early stages of the program are very cautious in letting instructors know how much they already know about reading, so early evaluation can be difficult. Basal reader series are rejected as damaging to adult egos, and programmed commercially available materials are utilized in their place. The teaching approach is completely eclectic, depending on the preferences and insights of the teacher. The program stresses the need of the instructor to know a great deal about the day-today life aspiration level of the student, in order to select materials and vocabulary. Understanding concepts and meanings of sentences is considered important, word recognition skills are subordinated.

The article offers readers the following outline of "Developmental Reading":

I. Recognition pattern

    A. words in isolation
    B. words in content
    (Dolch basic list provided for "sight" words)

II. Recognition techniques

    A. Visual and structural analysis
        1. Endings, prefixes, suffixes
        2. Compoundings of words
        3. Change in root form
        4. Contraction
        5. Syllabification
    B. Phonetic analysis
        1. Phonic instruction--defined
        2. Vowel and consonant sounds

      3. Blends, digraphs, diphthongs
      4. Synthesis (blending and accent)
      5. Synopsis

III. Comprehension

   A. Interpreting meaning
   B. Perceiving relationship
   C. Evaluation
   D. Interpreting implications
   E. Reading for appreciation
   F. Dictionary usage

Vogel, A. L. Teaching teenagers: Integration of nine severe learning disabled children in a junior high school core program. Academic Therapy, 1973, 9, 99-104.

A group of nine children who were identified as having severe learning disabilities, was located in a self-contained sixth grade classroom in Park Ridge, Illinois. A team of teachers with learning disability experiences (academic specialists, a learning consultant, a coordinator of special education, a principal, and the district superintendent) were selected to implement integration of these children into a junior high school core program.

The team investigated the academic and social background of the nine learning disability children. They were assigned 81 additional children who were divided into four heterogeneously grouped homerooms; three homerooms each contained two of the learning disability children, while the fourth contained three.

Fundamental to the implementation of the program was the scheduling for individual students. A period of time was reserved for each academic teacher to meet with only the learning disabled children. The 81 children were divided into three homogeneous groups, with the learning disabled children making up a fourth; they had staggered academic sessions in the morning. In the afternoon they were heterogeneously grouped into classes of 30 for the nonacademic subjects.

The functional atmosphere resulting from the integration and grouping of the students was explained to all parents at a special meeting. Progress reports in the form of personalized letters were sent to the parents at midterm. New report cards were designed for the "low-achieving" and learning disability groups incorporating anecdotal records and letter grades reflecting positive attitudes in progress. Teacher-child conferences were held.

The evaluation of this program found it to have many educational, attitudinal, and social rewards. The author contends that the integration of learning disability children in the junior high school, when compared to the stigma of the self-contained classroom, can be a realistic adventure into innovative educational programs.

White, M. M. A junior high school program for the learning disabled. In *Successful programming: Many points of view*. Proceedings of the Fifth Annual Conference, ACLD, Boston, 1968.

White's article describes a junior high school class for LD children which is essentially a self-contained class within the junior high school structure. The philosophy maintains that it is not the teacher's job to get the child up to any particular grade level at the end of the year, but rather to help him learn how to learn. In this particular program nine children were involved--six boys and three girls. One was a sixth grader, five were seventh graders, and three were eighth graders who ranged in age from 13 to 16. Their abilities varied greatly. Some had been in special education classes since second grade and for some, this was the first.

A very careful evaluation was made of each child's past records and of the results of tests given when he entered the class. Techniques and materials were matched to his needs and were constantly re-evaluated throughout the course of the year. The seventh graders were in this class all day, except for certain nonacademic subjects. Eighth graders were each in a homeroom, where they also stayed for their first period class (in this class, they were expected to meet class requirements and do their own homework).

The main focus of the special education class was the teaching of the use of symbols, something which these children had not yet learned. The author felt that the students were not able to learn in groups--each must have his own program. Teacher aids were employed to work with the students on an individual basis. The ultimate aim was the satisfaction that comes from a job well done. Work had to be kept at a level below the frustration point so that a rebellious response was not aroused. One period per day, the class met as a whole, either as a formal class experience or in a group therapy session.

According to the author, the tape recorder was of infinite value to the teacher, as were an abacus, small counting sticks, and number-facts flash cards. The work was slow, painstaking, often frustrating, but White felt that it could be tremendously rewarding for the dedicated, interested teacher.

Whitsell, A. J., & Whitsell, L. J. Remedial reading in a medical center. The Reading Teacher, 1968, 21, 707-711.

The Reading and Language Development Clinic is part of the Child Study Unit, Department of Pediatrics, University of California Medical Center in San Francisco. It serves as a treatment facility for a small number of children who have difficulty learning reading, spelling, and writing. It also assists in the evaluation of children brought in with learning difficulties or who are described as "school behavior problems." Children between the ages of 5 and 16 are accepted for this service, and they are referred by pediatricians, schools, community agencies, or parents.

The child undergoes a physical and psychological evaluation and then a staff conference is held to review the case and offer recommendations. Several teachers work with the children either individually or in small groups of not more than five. Careful consideration is given to each child's strengths and weaknesses before a program is planned.

An advantage to such a program in a hospital setting is that the clinic serves as a catalyst, bringing together the current ideas and research tools of medicine, psychology, other paramedical disciplines, and education and facilitating their practical application to the classroom. Despite these close contacts, the actual decisions about the methods to be used are left in the hands of the teacher.

The child benefits because he has a direct association between the medical evaluation and his remedial program and this often improves his self-esteem. The parents are made to feel that they have strong allies in interpreting their child's difficulties to his school.

An advantage to the community is that the clinic provides a facility for the training of medical and paramedical personnel. It is also advantageous to have such a selected population available to the various specialties for research programs.

The authors believe that this interdisciplinary approach to the treatment of remedial reading problems is what is needed for the most effective results to be obtained.

Wiederholt, J. L. A report on secondary school programs for the learning disabled. A paper sponsored by the Leadership Training Institute in Learning Disabilities, Department of Special Education, College of Education, University of Arizona, Tucson, Arizona, July 1975.

Wiederholt has divided his report on secondary learning disabilities into four key areas. Chapter One, "The problem in perspective" is an overview into current problems in programming for learning disabled adolescents. The historical account of the development of the field of education for learning disabled students starts the chapter off, and it concludes with an examination into the relationship between special and regular education at the secondary level.

The second chapter is a study into the definitions, identification procedures, and characteristics of the learning disabled adolescent. A discussion ofthe numerous definitions of what constitutes a learning disability goes into some detail and recommendations are based on both a literature review and the author's own observations. Many of the current definitions are given. The variations of the three basic clauses of the definition -- disparity, process, and exclusion -- are detailed.

Instructional programming is the focus of the third chapter. Wiederholt delves into the whys and hows of assessing individual needs, including a section on measurement instruments. Different types of instructional programs are discussed along with "techniques for choosing appropriate educational materials." Chapter Four reviews secondary programs for the learning disabled now in effect, discusses the range-of-service concept, and presents a recommended range-of-service plan.

A final section provides a summary and conclusion of Wiederholt's major positions "relative to teaching adolescents with learning disabilities." These major positions include the statement that mainstreaming is not possible or desirable for all secondary learning disabled students. The author also believes that school systems should only serve three percent of their students under the learning disability label, but a greater variety of services should also be available. The need for basic academic and career education is also stressed. The role of regular education personnel and the lack of adequate research are included for discussion.

Chapter III

Education and Management for the Secondary Learning Disabled Population: Issues, Approaches, Techniques, and Case Studies

Adelman -- The not so specific learning disability population.

Advani -- The effect of the use of desk calculators on achievement and attitude of children with learning and behavior problems.

Ansara -- Language therapy to salvage the college potential of dyslexic adolescents.

Ansara -- The language therapist as a basic mathematics tutor for adolescents.

Balow, Bomquist -- Young adults ten to fifteen years after severe reading disability.

Bamman -- Organizing the remedial program in the secondary school.

Blake -- Making physical education helpful--not humiliating.

Blom -- Bases of classification for reading disorders.

Bormuth -- Reading literacy: Its definition and assessment.

Bradfield -- Preparation for achievement.

Brown -- Words and things.

Brown -- Cognitive changes in the adolescent slow learner.

Brown -- Curriculum and materials for secondary learning disabilities programs: What we have and what we need.

Bursuk -- Sensory mode of lesson presentation as a factor in the reading comprehension improvement of adolescent retarded readers.

Camp [illegible] Learning rate and retention in retarded readers.

Cawley -- Math curricula for secondary learning disabled students.

DeWitt -- Diagnosing and treating reading problems in junior high school.

Dillner -- The effectiveness of a cross-age tutoring design in teaching remedial reading in the secondary schools.

Drake, Cavanaugh -- Teaching the high school dyslexic.

Early -- Taking stock: Secondary school reading in the 70's.

Edgington -- A hard row to hoe.

Evans -- Remedial reading in secondary schools--still a matter of faith.

Feshbach -- Empirical evaluation of a program for the remediation of learning disabilities in culturally disadvantaged youth, some issues and data.

Fiedler -- Did the clinic help?

Freston, Drew -- Verbal performance of learning disabled children as a function of input organization.

Freund -- Survey and recommendations on learning disabilities for Township High School District.

Getman -- Visual training as a useful resource. Part I: Is adolescence too late?

Gillespie, Sitko -- Conclusions from reading difficulties of the learning disabled adolescent.

Gordon -- Sex education for youth with learning disabilities.

Heinsen -- Visual training as a useful resource. Part II: A case for visual training.

Kline -- The adolescents with learning problems: How long must they wait?

Koppitz -- Special class pupils with learning disabilities: A five-year follow-up study.

Kratoville -- Youth in trouble.

Kronick -- What about me? The LD adolescent.

Lane, Miller -- Listening: Learning for underachieving adolescents.

Lerner -- Toward a taxonomy of remediation.

MacIlvaine, Cooper -- Some stories of real people.

Maietta -- The role of cognitive regulators in learning disabled teenagers.

McClelland -- Adolescents: It's never too late to learn.

McCoy -- Braille: A language for severe dyslexics.

Muehl, Forell -- A follow-up study of disabled readers: Variables related to high school reading performance.

Murray -- Individualization of instruction in special learning disabilities resource classroom: A comparative study.

Pellettieri -- The neurophysiology of learning and pedagogy.

Poremba -- The adolescent and young adult with learning disabilities: What are his needs: What are the needs of those who deal with him?

Prawat, Gaines -- Paired-associate performance in normal and learning disabled youngsters.

Quadfasel, Goodglass -- Specific reading disability and other specific disabilities.

Revelle -- Aiding children with specific language disability.

Rice -- Learning disabilities: An investigation in two parts. (Part two)

Scagliotta -- Reporting the progress of the language disabled child.

Schreiber -- An empirical approach at the secondary level.

Scranton, Downs -- Elementary and secondary learning disabilities programs in the U.S.: A survey.

Silberberg, Silberberg -- Myths in remedial education.

Silberberg, Silberberg -- The bookless curriculum: An educational alternative.

Silver, Hagin -- Specific reading disability: Follow-up studies.

Sitko, Gillespie -- Conclusions for speech and language difficulties of the learning disabled adolescent.

Terrell -- Writing English lessons for the non-academic adult.

Tolor -- An evaluation of a new approach in dealing with high school underachievement.

Weiner -- A language-delayed child at adolescence.

Weiss, Weiss -- A survival manual: Case studies and suggestions for the learning disabled teenager.

Wiederholt -- Adolescents with learning disabilities: The problem in perspective.

Wiig -- The emerging LD crisis.

Wiig, Semel -- Logico-grammatical sentence comprehension by adolescents with learning disabilities.

Ysseldyke -- Process remediation with secondary learning disabled children.

Adelman, H. The not so specific learning disability population. Exceptional Children, 1971, 37, 528-533.

A youngster's success in school is not only due to his ability, but also his interaction with the classroom environment. The author suggests that "there are children whose learning difficulties are due...to the fact that their classroom programs are not effectively personalized to accommodate individual differences."

In accord with this theory, all students diagnosed as learning disabled could be further classified into the following subgroups: (1) youngsters who have major disorders; (2) youngsters who have minor disorders and could be motivated to compensate for these disorders; and (3) youngsters with no internal disorder but who do not function well in "nonpersonalized instructional programs." The position taken here is that whenever a youngster's learning problems can be attributed to deficits in the instructional process, that child should not be categorized as learning disabled.

A two-step sequential remediation process is presented. The first step would establish a personalized learning environment, the second would employ remedial strategies for those youngsters who continue to have learning problems after step one. Those students who are successful after step one, should never have been labeled learning disabled.

Students who continue to exhibit learning problems would move to the second step programs. Here, the "sequence and level of instructional focus" would depend on the degree of disorder. Sample sequences are described within the article.

Advani, K. The effect of the use of desk calculators on achievement and attitude of children with learning and behavior problems. A paper presented at the Fourteenth Annual Conference of the Ontario Educational Research Council, Toronto, 1972. (ED 077-160)

"Technology is gradually playing an important role in the present education," according to author Advani. Primarily concerned with desk calculators, the author formulated two hypotheses to determine if their use would benefit learning disabled students. The first hypothesis concerned the use of desk calculators resulting in higher scores on standardized tests; and the second dealt with changes in self-confidence and attitude toward learning.

For six months, a group of 18 students in a special class had access to calculators in the classroom. The subjects ranged from twelve to fifteen years of age, and had IQs between 68 and 116. The author found that being able to use the calculators when necessary helped reduce the fear of failure and provided a means for the students to better understand the process of computation. Another benefit of the use of the machines was that it provided a change for the student with a short attention span and consequently reduced tension in the classroom.

The author's conclusions, drawn from testing procedures and questionnaires included the fact that the subjects showed marked gains in a standardized achievement test. The student's attitudes in the classroom were also improved at the end of the study. Calculators not only added variety to the classroom procedures, but also helped the author to individualize his instruction.

Ansara, A. Language therapy to salvage the college potential of dyslexic adolescents. Bulletin of the Orton Society, 1972, 22, 123-139.

The adolescent with specific language disability often has a high degree of potential ability but has been misunderstood and neglected for years. The author believes that if "his primary problem is recognized and dealt with appropriately, the dyslexic adolescent becomes free to establish and pursue goals that can include college. Although much precious time has been lost and much needless 'school trauma' endured, it is still not too late to salvage the college potential of the dyslexic adolescent through language therapy."

Throughout the school years, the dyslexic has been learning and storing vast amounts of information. This knowledge, however disordered, can be tapped and reorganized. Therapy must not only deal with language, but with academic skills as well.

The author goes on to give concrete examples of techniques successful in language therapy. One method was adapted from Orton's work with stutterers. It involves using a pencil to coordinate eye and brain during the reading process. After some proficiency is developed with this procedure, syllabication, still utilizing the pencil, is introduced. The concept of phrase, first orally and then in reading, is taught next. Spelling, sentence construction, and handwriting are then introduced.

With the improvement of language arts skills, the dyslexic gains new confidence, freedom, and perspective. The author stresses "overlearning" of skills so that the student will have a margin and "be more sure of academic success when he is on his own."

Ansara, A. The language therapist as a basic mathematics tutor for adolescents. Bulletin of the Orton Society, 1973, 23, 119-139.

The language therapist who teaches the dyslexic (defined here as "an otherwise healthy and normal individual who has specific problems of a primary nature with learning to read, write, spell, or manipulate symbols... ") may find that the youngster has problems with math as well as English. Ansara believes that the same insights used in the teaching of language skills may prove helpful in the teaching of basic mathematics. Traditional teaching devices are of no value to the child who, due to his perceptual difficulties, is transposing numbers, omitting steps in a sequence of operations, or misaligning columns of numbers. The author cites various studies in which there is an association between arithmetic deficits and dyslexia.

The student must be given a sequence and a structure which will permit him to recognize the patterns of the material to be organized. The experiences which develop the sequences and structures must be designed to: (1) circumvent or overcome sensory modality deficits; (2) circumvent the problems with spatial or temporal relationships or sequencing; (3) develop organization and integration; and (4) provide the associations that will ensure memory. Each experience must allow the learner to construct logical rules which he can apply to more difficult material as he progresses. It is most important to avoid a repetition of the kind of teaching that has proven unproductive in the past.

A sample of a basic arithmetic curriculum for dyslexics is presented in this paper, along with two case studies of boys who have derived great benefit from the method. In the author's view "...all dyslexic children should be considered at high risk in arithmetic and later mathematics until their performance in school has demonstrated otherwise."

Balow, B., & Bomquist, M. Young adults ten to fifteen years after severe reading disability. *Elementary School Journal*, 1965, *66*, 44-48.

This study was designed to obtain an idea of the psychological and social status of young adults who had been diagnosed as disabled readers during elementary school. The subjects were 32 males who had initially studied at the University of Minnesota Psycho-Educational Clinic during the years 1948 to 1953. Ten to fifteen years later, at the time of the follow-up, the men were twenty to twenty six years of age. Initial contact occurred between seven years, eight months of age and thirteen years, five months of age. Subjects had an intelligence quotient in the average range as measured by the Stanford-Binet Scale or the Wechsler Intelligence Scale for Children administered by psychologists in the Psycho-Educational Clinic. Initial reading level was two to five years below age grade expectation. Two-thirds of the pupils were reading at or below second grade level.

The first phase of the follow-up was a telephone interview with the subject relating to his academic accomplishments and goals, occupational status, extent of remedial reading aid, and general attitude toward reading.

The second phase of the follow-up was direct testing of those subjects who would come to the clinic for personality and reading tests.

For the purposes of data collection, the subjects were divided into three groups: those who agreed to come to the clinic for testing, those who did not come for testing, and those who were not available for an interview.

Two tables are presented in the paper with summaries of data for the three groups. Nearly all of the subjects had attended some kind of remedial reading program during their elementary and/or secondary school years. These programs included summer school, private tutoring, and speed reading courses.

The authors suggest, as the outcome of this follow-up, the following hypothesis for detailed investigation: "Males who are severely disabled in reading and who come from a middle class metropolitan area will attain average adult reading proficiency (approximately tenth grade level), graduate from high school, possess mild emotional disorders of a neurotic type, and find jobs over a wide range of occupational levels. But proportionately more of these men, compared with a group of average readers who made normal progress through school, will have semi-skilled and unskilled jobs."

Bamman, H. Organizing the remedial program in the secondary school. Journal of Reading, 1964, 8, 103-108.

The term "remedial" in the context of this article refers to a program for students in the secondary schools who are not reading at their level of expectancy and whose reading is so poor that they benefit little from regular classroom instruction in the various content areas. In organizing such a program, factors to be considered are the student population and its needs, the availability of a professionally trained reading teacher, and the budget for the remedial program.

Ideally, a separate room should be provided for the reading specialist, containing a wide variety of books, periodicals, practice materials, a projector, a tape recorder, etc. Cooperation of all staff members is essential for the program to succeed. Of utmost importance is providing for the transfer of skills in the regular classroom. Definite policies regarding the referral of students to remedial class should be established so that enrollment is limited to only those who are likely to benefit from instruction. A close association should exist between the reading teacher and the school librarian.

In the matter of grouping and class size, flexibility is the key to success. An ideal figure is ten students per class, although some skills can be taught in groups as large as thirty. For each individual student, the nature of the reading difficulty will usually dictate the length and frequency of instructional periods. His maturity and personality must also be taken into account.

In order to determine the proper procedure to follow with each student, a careful diagnosis must be made, including tests, examination of his records, and interviews with the student and his teachers. Nothing is more important than helping him to achieve some success and the realization that further success is possible. The student must also be made to see that remediation is a result of his personal effort and not a donation from his teacher. The good program is always based on continuous evaluation of the student's needs and the teaching methods.

In conclusion, the author believes in the necessity of an eclectic approach to remediation, with flexibility being the main ingredient of success.

Blake, W. O. Making physical education helpful--not humiliating. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

It is the author's strong feeling that all people, handicapped or not, deserve all the benefits to be derived from a good physical education program. The goals of such a program should be development of movement facility, development of specific skills, and the enhancement of the feeling of self-worth. Blake believes that most physical education programs are geared for the gifted and do not consider the needs of the neurologically handicapped student, since most employ the stimulus-response or response-to-command method of teaching. This is not usually the most effective way of reaching the person with motor problems.

One alternative to this approach is that of movement exploration. The teacher verbally presents a movement problem or challenge and the student attempts to find a solution to the problem the best way he can. There is no one right solution, so any method assures success; the person is performing in a way that's best for him. When used in conjunction with other methods, this can be very effective.

A piece of apparatus devised to provide developmental movement experiences is adding a new dimension to physical education programs wherever it is used. It is the Stegel and consists of two saw horses, three balance beams, a ladder, and a springboard. The pieces are interchangeable and by varying the arrangements, the Stegel can help a student gain a sense of balance, coordination, flexibility of muscles, and good posture. Another aid is the parachute, which provides a group learning experience since children must work together to make it work.

Practices which the author feels are harmful to the handicapped student include elimination type activities, supervised play in which the highly skilled dominate the activities, giving the students the responsibility for choosing their own teams, labeling those who are not especially agile, and using physical activities as a punitive measure. He also objects to encouraging competition against national norms rather than against one's own individual records. He feels the role of competition should not be to prove but to improve.

To provide the most activity for the greatest number of people, physical education programs need to have more efficient organization, better selection of activities, and enough supplies and equipment for every student to be able to participate. Since learning comes by doing, it is most important to increase the doing opportunities for all.

Blom, G. Bases of classification for reading disorders. Journal of Learning Disabilities, 1970, 3, 607-617.

In reviewing 24 references on classification of dyslexia and related reading disorders, the author found that a number of methods were used. These methods can be divided into four groups. An outline detailing various theorists and their classification systems is given under the discussion of each group.

The first group includes classifications according to reading functions. The author explains that "such classifications are most often used by remedial reading teachers or by classroom teachers in a less intensive fashion." The second group is classifications according to etiology. "Classification systems within this group also vary considerably from global to specific."

The third group contains classifications by theoretical models, such as psychoanalytic ego psychology, structure of intellect, psycholinguistics communication--language and neurophysiology. The fourth group is nosological systems. "This is based on the premise that some characteristics of reading disability can appropriately assume the form of a disease classification."

In the conclusion, the author states that "at this time...it would seem desirable to begin again with a descriptive or behavioral method of classification."

Bormuth, J. R. Reading literacy: Its definition and assessment. Reading Research Quarterly, 1973, 9, 7-66.

The purpose of this article is threefold. First, it analyzes the various definitions of literacy; second, it identifies various problems of literacy measurement; and third, it describes currently available literacy assessment procedures.

Bormuth quotes a broad and popular definition of literacy as follows, "being able to respond appropriately to written language." A more specific and educationally relevant definition is given as, "the ability to respond competently to real-world reading tasks."

Studies show the illiteracy level to be very high. The author feels that the available statistics are unreliable "for none of them is based either on a careful analysis of the concept of literacy itself or on suitable methods of measurement." Several common criteria for assessing literacy are examined and described to show ways they are misleading. These include, functional literacy, achievement level, grade level expectancy, and proportion below grade level.

The nature of literacy is explored in this article within five parameters: (1) "the behaviors we wish to observe,(2) the criterion level of performance we expect a literate person to demonstrate on tests of those behaviors,(3) the kinds of materials on which we test the behaviors,(4) the criterion proportion of the reading tasks on which the person must exhibit a literate level of behavior, and finally (5) certain characteristics of the person tested, such as his aptitude and practical needs (goals).

The article contains discussions on comprehensive and fragmentary programs, taxonomy of literacy behaviors, measuring literacy behaviors, selecting a test mode, criterion of literate performance, and procedures presently practical. The conclusion stresses the need for a model to jointly identify a criterion of literacy and readability.

Bradfield, R. H. Preparation for achievement. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

The author presents the idea that learning disabled students often have great intellectual capacity; this must be given consideration in establishing a curriculum for them. Programs designed for LD students should not focus exclusively on remediation of their disabilities, bypassing information other children receive daily in regular classrooms. It is this fund of information that provides the basis for a well-rounded intellect. He says that "the longer the child remains in a program that places major emphasis upon the disability, the farther behind he falls in all other educational areas, even though some progress may occur in the area of the disability."

Social skills need to be developed both at home and in the classroom. Failure in this essential area can be more detrimental to one's ability to hold a job than deficiencies in educational areas. The student with high intelligence should be given the benefit of a well rounded education so that he will stand a better chance of competing in the world and can be more objective in choosing an occupation.

Since reading is a great problem area for learning disabled students, it is felt that for education to be effective it must develop techniques to present information and material through other channels. Bradfield also expresses the idea that occupations such as medicine, law, and engineering would not be closed to these youngsters if there were alternative methods available by which learning could take place.

Motivation is closely tied to past experience of success. Therefore, educational programs must concentrate on areas of strength so that the student can get to know how it feels to succeed and perhaps be motivated to seek out new challenges both in school and in the world of work.

There is a great scarcity of trained teachers in the area of learning disabilities and very few courses available to train greater numbers of them. Unless this is rectified, students with learning problems will continue to be misunderstood and misdirected.

With the advancement of technology, tools such as tape cassettes, computers, and videotapes should be used to make it possible for the disabled learner to gain information in ways which make sense to him.

There is still a long way to go, but advances are being made. Hopefully, the LD student will soon be getting the help he so badly needs.

Brown, G. Words and things. Journal of Learning Disabilities, 1972, 5, 572-575.

Many children have more difficulty processing and remembering words than they do real things, events, experiences. Brown's essay is a plea for professionals to help parents and teachers understand the dramatic difference between words and things and to help them see that many children are quite capable with direct experience even if not with words. When speaking with parents of learning disabled children, and especially if those disabilities are in language, professionals should help the parents accept different styles of thinking. Over attention to reading, writing, and other verbal skills may make a child and his family feel that he is a defective thinker. He may have developed an ability to deal with concrete experiences earlier than he developed verbal facility.

The author concludes that parents must be reassured that there are many acceptable alternative methods of accomplishing educational goals. Children must not be punished for thinking in ways that are successful for them.

Brown, R. I. Cognitive changes in the adolescent slow learner. Journal Child Psychology Psychiatry, 1972, 13, 183-193.

Brown briefly reviews various studies written since 1948 which seem to indicate that adolescents who are moved between "less adverse" and "more adverse" environments show changes in intelligence as measured by many standardized tests. The author concerns himself in the paper with adolescents regarded as slow learners and whose changes in intelligence (upward) were viewed as the result of either removal from "adverse home conditions" or to improvement in nutrition resulting in compensatory growth. He asks in his study, (1) if adolescents remaining in home environment also show improvement in intelligence; (2) if subjects from "adverse" homes show greater improvement than those from "non-adverse" homes; and (3) whether specific changes in verbal and performance I.Q. scores are associated with particular home environments?

Brown's study took place over a three year period, beginning with the subject's last year of school. The short form of W.A.I.S. was used to focus on subtests associated with verbal intelligence and performance factors. The Ss were male and at the start of the study two or more years below grade in reading or mathematics.

Brown views the most important finding of the study as the fact that students from "adverse" homes increased in both verbal and performance scores, despite the fact that they continued to live in "adverse" home environments. Also, the "adverse" group had greater performance I.Q. score gain than those in the "less adverse" group, and significant disparity between performance and verbal scores. Brown views the results as supporting the hypothesis that subjects from "adverse" environments show greater cognitive growth in adolescence, but that this is not dependent upon removal from the adverse condition.

Brown, V. Curriculum and materials for secondary learning disabilities programs: What we have and what we need. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

Certain factors in secondary education -- student characteristics, school organization, curricula, and teacher training -- suggest that secondary programs in learning disabilities cannot be developed from the superimposition of elementary models. Any considerations of curriculum and materials must take these factors into account.

Traditional "remedial" programs have been notably unsuccessful in providing positive assistance to the student who is experiencing learning problems in secondary education. All we have available to deal with these problems at the present time are elementary methods and materials which we apply to older students, supplemented by a residual from older notions of remedial reading and math. What is needed is a very different, commonsense approach to the problems of the student and his "special" teacher.

The development of anything like "A Curriculum for the Learning Disabled Secondary Student" would be unfortunate because it would perpetuate one of the major problems of the student. That is, it would give a set scope and sequence that the student would be expected to "go through"; one that might have nothing to do with the reality of his world, either personal or academic. The secondary student has had a longer period of time within which to develop his uniquenesses. It is in the area of student uniqueness that the secondary LD teacher must deal.

In Britain, primary school education concentrates on educating the teacher to analyze children's response patterns and to restructure activities accordingly. There is an assumption there that the teacher who understands the learning process and the children, will be able to select or create appropriate learning materials. A similar approach would seem desirable in all of education and imperative for secondary age students labeled learning disabled. Curriculum and materials must be built around the problems of the LD student and teacher who find themselves in the secondary milieu.

Very little of what is needed in secondary program development comes from special education per se. Instead, we must go outside the field to find resources in areas such as: counseling techniques; secondary curriculum development and modification; the "unwritten" curriculum, such as "teacher pleasing behaviors"; in-service training, both direct and indirect; school law; secondary school organization; public relations; community analysis; values clarification and moral education; self-modification of behavior; career education; parent counseling; parent education; how to teach basic skills through activities of interest to older students; how to locate materials; gaming; test taking; independence producing education; how to use available resources to obtain needed assistance; or social skills. The author feels that curriculum and materials development to promote learning in the secondary schools is an exciting venture--once the special educator frees his mind from the traditional views of these topics.

Bursuk, L. Z. Sensory mode of lesson presentation as a factor in the reading comprehension improvement of adolescent retarded readers. New York: City University of New York, York College, 1971. (ED 047-435)

The author compared the effectiveness of two remedial reading approaches with adolescents from ages 14 to 16, with I.Q.s ranging from 92 to 114, and reading levels approximately two levels below grade. Ss were classified according to learning style preference and then exposed to a predominantly visual traditional reading approach or an experimental aural-visual approach.

The hypotheses tested were that:

(1) adolescent retarded readers taught by a combined aural-visual approach will achieve a greater gain in reading comprehension than those taught by a predominantly visual approach; and

(2) there will be a (significant) relationship between sensory modality preference and emphasis of instruction with reference to comprehension
(A-V approach will be more effective in improving the comprehension of "auditory learners" and those without a sensory preference than with "visual learners"),
(the mainly visual approach will be more effective in improving the comprehension of "visual learners" than that of "auditory learners" and those with no preferences).

Bursuk makes several assumptions in her rationale. One is that verbal comprehension skills (especially in retarded readers) may be expected to transfer from listening to reading. Another is that listening instruction is an "efficacious approach to utilize for development of thinking skills."

Tenth grade students were tested on the California Test of Mental Maturity, form A (non-language section) and the California Reading Test. Those who met rough LD initial screen criteria were selected for the study. STEP Reading and Listening Tests were administered to the entire subject population of 132 and this information was used to subclassify the subjects as to modality preference. After classification, groups of 30 were established, and further separated into experimental and control groups differing as to remedial technique used; there was a total of 90 Ss. Tests yielded no significant intergroup differences as to test performance.

After a semester of instruction differing as to emphasis on visual or aural comprehension, all subjects took Form W of the California Reading Test. The first hypothesis was strongly confirmed, as was the second hypothesis.

Bursuk concluded that a choice of learning styles should be offered, but if not, an "audio then visual" style should be utilized.

Camp, B. W. Learning rate and retention in retarded readers. Journal of Learning Disabilities, 1973, 6, 65-71.

Camp's paper deals with a study designed to determine if some correlation does in fact exist between rate of learning and long-term retention. The subjects of this study were 46 children between the ages of nine and eighteen, with IQs above 75, and who were reading below the third grade level and at least two years below actual grade level.

The data in this study is based on one to five tutoring sessions per week. These sessions involved "presenting token rewards for correct responses during a half hour individual reading lesson which covers new vocabulary, paragraph reading, total story reading, and answering comprehension questions based on the story." The child would not advance to the next lesson in the sequence until correct responses were given on the vocabulary lists and paragraphs. Records were kept of all errors during the sessions. This material was used for the test at the end of the sequence. Learning curves were then established for each subject.

The results of the study indicated that the "majority of these retarded readers showed the same kind of learning curves as seen in normal children on a variety of learning tasks." A child showing a very different pattern might be diagnosed as a case of pathological learning disability. The author also feels that the results of such a study can be used as a basis for equating "degree of original learning."

Cawley, J. F. Math curricula for secondary learning disabled students. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

Cawley observes that comprehensive planning at the secondary level is one of the more neglected areas of special education, and the problem is particularly acute in mathematics. It is difficult to separate out what constitutes failure, underachievement, and learning disability. "Failure," as defined by standardized achievement tests or an individual's grade score, is greater in mathematics than in any other secondary level subject area and many characteristics of failing students identified in the literature of underachievement seem to resemble those of students identified as learning disabled. But he sees our present problems, in part, as a function of some of the hidden agenda underlying our early approach to the treatment of learning disabilities.

Cawley cites three factors in this "hidden agenda." One was the difficulty of developing a set of criteria for areas of special education that were exclusive enough to preclude the use of existing categories, but inclusive enough to give us a population in need of program development. The second was the implication that the difficulty "represented a set of curable phenomena," which resulted in a focus on rapid improvement in the developmental status of the learners and a near total disregard for comprehensive curriculum planning. The third emanates from the fact that we have as professionals given the impression that we had produced the diagnostic and instructional practices necessary to meet the needs of the learner, while a closer look reveals that "clinical experience and intuition are the dominant sources of our knowledge bank, rather than substantive research." The net result, according to Cawley, is that "we continue to have a definitional problem, we are fostering a lack of comprehensive planning, and we are training individuals without an adequate body of research and knowledge upon which to base those programs."

To remedy this situation in all areas, Cawley proposes, as a fundamental principle, that diagnosis and instruction be linked together. He further suggests that, especially in mathematics, programmatic efforts must consist of two components, one a remedial component and the other a curriculum component that is characterized by a comprehensive scope and sequence of mathematics.

Failure and learning disability are not synonymous in mathematics, and the distinctions can be kept clear if the element of chronicity is retained in LD diagnosis. IQ must be partialed out or covaried, since children at all ability levels can be learning disabled in mathematics.

Cawley cites a number of studies, most rather recent, which point out the complexity of the learning problems in the area of mathematics. However, in general, he views this area as largely ignored in the field, and most of what there is seems restricted to the area of basic arithmetic.

Cawley proposes the development of a diagnostic strategy that will integrate the parameters of content (curriculum), mode (types of instructor/learner interaction), and algorithm (rule by which the learner attempts to solve the tasks) so that one can determine not only the content level of function the individual employs, but also his most or least efficient mode of performance and the appropriateness of the way in which he attempts to approach the problem. One tool available for this is the Clinical Mathematics Interview (CMI) which Cawley discusses and illustrates.

The difficulty of the child with learning disabilities is accentuated at the secondary level, Cawley believes, for a number of reasons. Among these are: (1) he has not attained the required skills, and the curriculum does not encourage a remedial orientation; (2) he is grouped with children of much lower general cognitive ability; (3) he is channeled into a form of program which may be inconsistent with his personal goals; (4) the subject matter specialist lacks the psychoeducational expertise necessary to interpret cognitive perceptual or linguistic data relevant to mathematics; and (5) the child who is symbolically deficient (e.g., unable to read) may be capable of cognitive performance at the level of formal operations and may be able to learn math without reading.

One might also reduce the negative impact of a content based curriculum by applying the same content/mode/algorithm approach to curriculum and to the diagnostic/remedial process itself.

The administrative components necessary for an effective secondary school program include a team made up of math, remedial and instructional specialists, and a diagnostician, as well as adequate physical arrangements including space, materials, planning time, and access to the "curriculum committee." And all of this, Cawley suggests, has a better chance of success in programs which employ staff with background in both mathematics and special education.

DeWitt, F. Diagnosing and treating reading problems in junior high school. In *Successful programming: Many points of view*. Proceedings of the Fifth Annual Conference, ACLD, Boston, 1968.

This report was written four months into a two year reading project conducted with seventh and eighth grade students at the Solano Junior High School, Vallejo, California, from 1967 to 1969. The project focused on the relationship of neurological impairments to learning disabilities.

Forty eight students of average or better intellectual ability were given the following tests: WISC; a specialized battery of tests relating to auditory and visual memory, perception, and discrimination; tests of laterality and directionality; reading tests; tests of motor performance; a comprehensive neurological examination, including an EEG; and vision and hearing screening.

Following the initial assessment, students were evaluated individually by the entire team of specialists (two pediatric neurologists, a psychologist, an academic diagnostician, a social worker, and a school nurse) and were classified as either dyslexic or nondyslexic.

The children were divided into three groups which were each divided into two subgroups. Group I received neuropsychological treatment and was divided into dyslexic and nondyslexic. Group II received educational treatment and was divided into dyslexic and nondyslexic. Group III was the control group--the two subgroups were undifferentiated and received regular educational treatment.

There are no results reported here since the project had not been in operation long enough. However, the author makes the following observations: a project of this type should be designed for a minimum of two years, the location of classrooms should be carefully considered, and sufficient funding should be requested in order to assure full diagnostic assessments of the children and to enable the team to make further referrals if necessary.

Dillner, M. H. The effectiveness of a cross-age tutoring design in teaching remedial reading in the secondary schools. (Doctoral dissertation, University of Florida) Ann Arbor, Michigan: University Microfilms, 1971. No. 72-15, 671

A group of senior high school remedial readers was selected to serve as tutors in reading for junior high school students with reading problems. It was hoped that the experience would cause the senior high students to question preconceived notions about their academic abilities, improve their self-concept, expand their social relationships, develop a more positive attitude toward school, and improve their reading skills. The study was carried out during most of a one year school term. The control group consisted of 13 senior high students of comparable ability who did not serve as tutors.

Standardized reading and self-concepts tests were given to the experimental and control groups in pre- and posttesting in order to assess growth. The tutoring took place once a week, with the tutors having a training session the day before in order to plan the lesson. A short seminar followed each session in an effort to evaluate and improve the tutoring techniques.

Although the tutors gained in many areas, the only significant differences between the two groups were in reading skills (in poetry comprehension) and in self-concept (autonomy). No significant difference existed in the relationship between reading and self-concept; or between the two groups in the relationship between reading and attitude toward school. But when each group was looked at separately for this factor, the experimental group exhibited relationship between growth in reading and growth in attitude toward school.

Implications suggested in this dissertation were that the classroom teacher has the main responsibility for the success of the program, and that cross-age tutoring has much applicability for the average classroom.

Drake, C., & Cavanaugh, J. Teaching the high school dyslexic. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

Drake and Cavanaugh express the belief that effective remedial work begins with a proper and honest diagnosis of the basic problem or problems involved in the underachievement. The lumping of all scholastically handicapped students into one group is not an effective way of treating the problem. The subject of this paper is the adolescent dyslexic, defined as the student of normal or high intelligence and sound emotional health who is underachieving in the language arts areas because of late or irregular development of perceptual motor functions. He is often spoken of as having specific language disability or minimal brain dysfunction. Most adolescents falling into this category are boys, usually from families with patterns of late or poor language development.

Impairments in language acquisition may occur in biologic language, speech, decoding skills, coding, or second languages. This last area seems to encompass between six to ten percent of the total school population, and probably represents the largest single group with one identifiable pathology. Within the broad spectrum of language disability children, there are many different behavioral manifestations which should shape the remedial method used for the particular symptoms being expressed (e.g., the "verbals" and the "nonverbals").

Characteristics of dyslexic students who want to succeed in school are discussed. Included are low ego status, paralysis of efforts, supersensitivity to external clues, time panic, ambivalence over intelligence, and dependence. The basic remedial tool which applies to all these areas is success. The student must be able to succeed at some level, no matter how low it might be at the start; he has to reverse all the negative feelings he has about his capabilities and self-worth. Quiet firmness is the most effective mode of teaching since strong negative outbursts are especially difficult for the dyslexic to tolerate. A balanced remedial program should also preclude dependency relationships in order for the student to learn to rely on himself. He must be made aware of the fact that he has intelligence and is not "dumb" as he believes.

In conclusion, any remedial program for language disability youngsters must consider the following: adequate diagnosis; remediation beginning at the appropriate level; discovery of the real, as opposed to the superficial breakthrough point; encompassing of a large number of activities related to total growth; teaching of total language skills, not just reading; a highly structured approach to reading, spelling, and writing; assuring that success occurs at every step along the way; a diversity of "set" involved in all teaching; learned language skills which are practiced until automatization is perfected; correction of auditory and visual problems; and planning in advance for the continuous growth of the student.

Educators, administrators, school boards, and taxpayers must be educated to the job that must be done and the tools that must be used to help these students learn.

Early, M. Taking stock: Secondary school reading in the 70's. Journal of Reading, 1973, 16, 364-373.

A cursory overview of the "state of the art" of the teaching of reading at the secondary level is the subject of this article. Unfortunately, from the author's vantage point reading instruction has changed very little over the years despite the repeated exhortations of the reading specialists. Reading instruction per se (instruction in reading and study skills) generally still does not extend beyond the eighth grade. High school instruction is highly departmentalized, with teachers who are skilled in teaching reading generally to be found only in the English departments. Reading instruction in the content areas is quite rare, as teachers do not yet acknowledge their responsibility for teaching reading along with their content material.

Early's statement of reading goals for illiterate adolescents is particularly germane to the topic of secondary learning disabilities. The goal, she says, is "to raise them to levels of functional literacy that will help them to cope with the paperwork of our bureaucracy." She also believes that once such students have reached functional literacy levels they should no longer be assigned to reading skills courses or study centers. The best approach to continued reading instruction, particularly for the older adolescent, may be through work study programs where the utility and importance of reading becomes obvious.

Edgington, R. A hard row to hoe. Academic Therapy, 1973-74, 9, 231-233.

The author is concerned with the difficulties which face the learning disabled teenager who is expected to cope in regular grade placement. Being a teenager is difficult enough without being crippled by a lack of skills needed to deal with peers, adults, society, and the environment.

College would result in failure for many of these students, and so the educational system should help prepare them for gainful employment. Certain basic skills must be learned by these teenagers, and the schools could help by providing such a curriculum at their own interest level.

Language, mathematics, and social skills are the three areas delineated by the author as deserving particular attention. Language skills provide a foundation for other skills and activities. Some objectives in the area of language are given in the paper, an example of which is: "write consistently and legibly his name, address, phone number, date of birth (and/or age), parent or guardian's name, address, and phone number, as well as those of previous employers...."

Arithmetic skills are basic to functioning in society. The learning disabled student should be taught to perform such functions as, "write numerals and common signs, such as decimal point, cent, and dollar signs clearly."

The learning disabled student has a great need to be accepted socially yet this is often impossible as he has great difficulty relating to peers and supervisors. Communication is basic to his survival, and the handicapped student must not only recognize this, but do something about it. Lists of verbal and nonverbal goals are given by the author.

Edgington hopes that teachers find her lists of objectives useful in their attempts to help the learning disabled student cope with the world around him.

Evans, H. M. Remedial reading in secondary schools--still a matter of faith. *Journal of Reading*, 1972, *16*, 111-114.

One of the most common approaches to the problem of disabled readers in the secondary schools is some form of corrective or remedial reading course. However, the evidence to support the effectiveness of such courses is scanty and often questionable. Two assumptions behind these programs are that a majority of students enrolled will show a significant gain in reading ability, and that such gain will be sustained after the course is over. It is also felt that academic performance will improve as a result of increased reading ability.

Some criticisms of study methods and interpretation of data are discussed. One involves the use of the pretest/posttest study technique, especially when there is no control group. Another concerns the use of mean gains to determine and report the results of special reading instruction.

Several studies conclude that the remedial programs resulted in marked improvement for some, but certainly not a majority, of the students involved. Studies of the long term effects are few in number and generally unfavorable. There is small gain in the rate of growth and in the difference between treated and untreated groups. Severe reading disability demands long term treatment, not the short course generally offered in current programs.

The research suggests two conclusions: (1) there is only questionable support for the beliefs that existing programs are a solution to the problem of the disabled reader, and (2) unless supportive instruction follows remediation, any benefits gained from the program will be lost, and will not reflect favorably on the student's classroom performance.

Feshbach, S., et al. Empirical evaluation of a program for the remediation of learning disabilities in culturally disadvantaged youth, some issues and data. Los Angeles: University of California at Los Angeles, Department of Psychology, 1967. (ED 034-805)

The Fernald School at U.C.L.A. has undertaken a research demonstration and training program concerned with the remediation of learning problems in culturally disadvantaged children. The study described here was designed to evaluate the impact of an intensive, individualized remedial program upon the learning skills, aspiration levels, and self-attitudes of culturally disadvantaged children. It also compared their learning problems with those presented by the middle class population.

The subjects were elementary and junior high school students, advantaged and disadvantaged students, who participated in a six week summer remedial program and a full academic year program.

Preliminary data pointed to a number of significant propositions and conclusions: that the lower class family places a high value on educational values; that the child and his family value school achievement; that disadvantaged youth manifest, especially among older boys, considerable anxiety and fear of failure; and that what has been regarded as a conflict between the morals of middle class teachers and lower class children is really conflict in manners. The data showed that disadvantaged children with learning problems were responsive to individualized instruction programs; the full year program group at the junior high school level showed the most improvement.

Fiedler, M. Did the clinic help? Journal of Reading, 1972, 15, 25-29.

An attempt was made in this report to analyze the reading behaviors, four years beyond remediation, of a group of students who had no further specialized reading help.

Information was gathered from 29 graduating seniors who had been helped at the reading clinic of a suburban Chicago large comprehensive high school in which the percentage of disabled readers was well over 15 percent. At the time of their enrollment in the clinic, these students met the established admissions criteria in that their reading achievement was two or more years below the level expected when their age and intellectual capacities was measured by I.Q. scores from the WISC or the WAIS.

Questionnaires to measure these changes in interest and attitudes toward school and reading after remediation were given to these 29 students.

Results showed some positive changes in attitudes, interest, and skills, but the numbers are far too small to allow any generalizations.

Freston, C. W., & Drew, C. J. Verbal performance of learning disabled children as a function of input organization. Journal of Learning Disabilities, 1974, 7, 424-428.

This study was conducted to explore the effects of organized versus unorganized material on the free recall performance of learning disabled children. The subjects were forty eight youngsters who were enrolled in a private remedial clinic. They ranged in age from 7 to 17, and their I.Q.s ranged from 80 to 133, with a mean I.Q. of 98.55. They came from middle to high socio-economic backgrounds. The subjects were randomly subdivided into two groups of 24, one group to be presented organized material (animals, geometric shapes, flowers, and food) and the other, unorganized material. In addition, the material ranged between high, intermediate, and low difficulty for both groups.

It was found that the degree of material organization did not significantly influence subject performance, but that the degree of difficulty of the material did. Grouping of material into four conceptual categories apparently did not facilitate its recall. However, more familiar words were more easily recalled than less familiar ones.

Some possible implications are discussed. It is suggested that the absence of more effective recall of organized material may indicate that these subjects were not sensitive to the conceptual frameworks used to organize the material. It may be that the learning disabled child either does not codify material or does so in a manner that is dissimilar to the frameworks used. It is also felt that decrease in recall performance of the more difficult words might indicate that general word familiarity is similar between LD children and the general population.

Authors believe it is possible that cognitive organization represents an important variable essential to the description of learning disability. Further study is needed in current diagnostic screening practices, as well as in the whole area of what constitutes a learning disability.

Freund, J. W. Survey and recommendations on learning disabilities for Township High School District, No. 113, Highland Park, Illinois, June 1969. (ED 038-810)

A special education study group was appointed by the Board of Education of Township High School District 113 (Highland Park, Illinois) to survey the district's service to secondary learning disability students and recommend a program designed to improve identification and treatment practices. The study group conducted interviews with teachers, administrators, students, and professionals working in this field. Conferences and lectures were attended and a review of the current literature, which is presented in the paper, was initiated.

Records of fourteen students were reviewed; seven students participated in a learning disabilities program the previous year and seven students were identified as having learning difficulties but who were not in the remedial program. Recommendations were made for research possibilities.

Learning disabilities programs in the underlying elementary schools were reviewed and recommendations proposed. In addition, twelve high school programs were presented and methods of intervention reviewed.

One outcome of the study was the recommendation for a Learning Action-Research Center, a resource room multifaceted remedial program, made after consultation with specialists in medicine and education. The recommendations presented to help implement the formation of the center included many from the areas of diagnosis, remediation, facilities and materials, staff, coordination, demonstration, and community and university involvement.

Getman, G. N. Visual training as a useful resource. Part I: Is adolescence too late? In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

The question presented by Getman is whether or not adolescence is too late to begin visual training. The author feels that it definitely is not providing the youngster is amenable to the idea and is willing to cooperate. The author defines vision training as learning how to see what one is looking at, steering and guiding oneself to get to the object or place viewed, and the motor action needed to complete the process. He believes that "vision is much more than sight; it is a learned procedure of interpreting what is seen and therefore can benefit from proper training." Vision training without confirmatory motor action, or motor activity without visual judgements of one's location in relation to one's surroundings, will not bring about the desired learning processes.

With a trainee who is willing to work at developing visual and motor skills, there is no age limit to learning. "All they need is the desire, and the proper clinical guidance by those who understand the total dynamics and the developmental role of vision and movement."

Gillespie, P., & Sitko, M. Conclusions from reading difficulties of the learning disabled adolescent. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

This review of the research concerning reading difficulties of the adolescent learning disabled student reached the following conclusions:

Ascribing specific reading characteristics to those adolescents classified as learning disabled is difficult because of the nature of the populations utilized in clinical and empirical evidence. A variety of interpretations of learning disabilities, dyslexia, minimal brain damage, and so forth, exist. Because of definitional confusions and varying identification procedures, heterogeneity exists from group to group designated as learning disabled.

The reading process has been defined differently by those researchers in reading and the other disciplines. Reading research in learning disabilities reflects these various interpretations. Most of the past research depicts a simplistic view of the reading process and most of the investigations have dealt with reading correlates rather than the reading process per se.

Assessment techniques in reading, for the most part, lack validity, reliability, and true diagnostic value. Quantitative rather than qualitative differences are most often measured by these tests.

Clinical and empirical data indicate that "learning disabled adolescents" continue to possess similar reading characteristics that have been ascribed to younger children with learning disabilities. Difficulties in basic sight vocabulary, reading comprehension, rate of reading, auditory and visual discrimination difficulties, and sequencing of letters are examples of these difficulties.

Very few follow-up studies have been conducted concerning the long term effect of programming in reading for learning disabled children or the problems accrued by adolescent and adult learning disabled. Moreover, those special and regular educators who are developing effective instructional strategies on the secondary level are faced with the critical issue of the lack of carefully validated programming developed for younger learning disabled from which to generalize.

Two critical issues should be addressed in programming for those adolescents designated learning disabled. First, more research should focus on the current theories in the field of reading. The lack of specificity of the research describing the reading characteristics of normal and inadequate readers is apparent. Most often, because of the utilization of a taxonomic model of reading, investigators who have studied the characteristics of poor readers have reported only reading levels and a few clinical observations of oral reading errors. More studies dealing with involvement of linguistic and information processing skills in the reading process should be conducted.

If educators are to consider the individual reading needs of learning disabled children and adolescents, a reorientation in research methodology, programming, and teaching training must occur. Rather than attempting to isolate or ameliorate various deficits using generic intervention programs, it would seem more feasible, based upon the review included in this paper, to conduct task analysis of children's behaviors in learning to read. Most often, reading approaches used in classes for the learning disabled employ phonics and/or whole word approaches which consider the word as the basic unit of reading. These methods neither attend to the communicative nature of reading, nor do they address themselves to the relevance of linguistic context, particularly to semantic and syntactic relationships in sentence structure in determining both word perception and comprehension. It is necessary that investigators in reading should develop training techniques which enhance the ability of learning disabled children and/or adolescents to efficiently attend to and utilize relevant linguistic strategies which take advantage of the basic structures of the materials themselves.

Second, children and adolescents who have been classified learning disabled tend to exhibit a wide range of abilities and disabilities. The heterogeneity of a supposedly homogenous population has been cited countless times in the literature. Although researchers may be able to identify learning disabled children and adolescents with similar clusters of characteristics, the development of instructional programming necessitates focusing on the individual and situation-specific assessment rather than merely determining general clusters of behavior. While particular reading difficulties may be remediated by specific instructional strategies, this may not be the case with every adolescent possessing that particular reading characteristic. Motivational factors, the influence of previous instruction and the nature of the content, e.g., social studies, will influence the efficacy of the intervention.

The information gathered from the classroom setting should have the most importance in terms of establishing instructional objectives for the child. In planning a program for the child, the teacher must conduct a task analysis of the reading materials and/or strategies available and a learner analysis of the child. Hopefully, there should be a match between the cognitive demands of the approach and the learning characteristics of the child. All programs established should consider as much data as possible including the preferred teaching styles of the teacher, the influence characteristics of other children in the classroom, etc. Instructional needs should be considered tentative by the teacher. Diagnostic teaching lessons ought to serve as trial lessons and data gathering should continue in this process. All the instruction should be part of assessment; hence, lessons are part of the continual and ongoing assessment of instructional needs. Evaluation should be in terms of effectiveness of the teacher and the gains of the pupil. The teacher ought to evaluate his/her effectiveness in implementing and monitoring instructional programs. Also, the establishment of concise objectives for the child and/or adolescent enables the teacher to evaluate the progress of the child and/or adolescent.

Gordon, S. Sex education for youth with learning disabilities. In Progress in parent information, professional growth and public policy: Proceedings of the Sixth Annual Conference, ACLD, Fort Worth, 1969.

It is Gordon's opinion that the field of special education is, in general, based on a series of false assumptions, all carefully documented by research. We say that the special child cannot cope with anything abstract, that he cannot generalize, that he has a short attention span. Perhaps this inability to focus on abstractions or generalizations is due to the fact that the child hasn't been taught at the point that he is most receptive.

A child who is handicapped is a child who has areas of adequacy co-existing with areas of inadequacy. But he does have areas of adequacy. That he has difficulties abstracting doesn't mean that he lacks the ability to abstract. He has areas of adequacy and perhaps, as an adolescent, his most devastating problem is that he is an Isolate; he has no friends.

The handicapped child has to know more about sex than the ordinary child. He has to know it sooner. He has to be able to anticipate what other children will say to him; he must not appear naive. He has enough trouble being handicapped, enough trouble with his learning disability, and enough trouble making any friends. He cannot appear naive in this sexual revolution in which we live, because almost everything is sex oriented. We tend to protect the handicapped child because of the fear that if we tell the child something about sex too soon, he will act out. There is no evidence that this is true. You cannot harm a child by giving him information. Even pornography is not harmful, according to the author. Children who read pornography and are interested in it are those who have not had a sound sex education at home. The children who are in-involved in sexual acting out have no way of gratifying their curiosities and have usually grown up in a rigid "moral" home.

The handicapped adolescent who wants to know the meaning of a four letter word cannot find this information through group interaction. You must tell him what obscenities mean, or let him read what they mean and he will not use them as a weapon.

The author's three rules concerning communication of sexual information are: (1) answer all questions frankly, including explanation of obscenities; (2) communicate that sexual activity is a private matter; and (3) explain that there is no such thing as an abnormal thought, feeling, or impulse. All thoughts are normal. Guilt is the energy for the compulsive repetition of thoughts that are unacceptable to the individual. It is alright to have any possible thought about sex, but it is not necessarily alright to put these thoughts into practice.

Heinsen, A. C. Visual training as a useful resource. Part II: A case for visual training. In L. Anderson (Ed.), *Helping the adolescent with the hidden handicap*. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

In the author's view, faulty vision caused by poor eye functioning or poor brain interpretation of what is seen can be at the heart of many school learning problems. Vision is defined by Heinsen as "meaningful seeing." Vision training is a developmental program aimed at improving meaningful seeing. "Its purpose is to integrate the eyesight with information being received from other senses for the purpose of developing educability, comfort, efficiency and enjoyment. It is aimed at making the world, as seen through the eyes, more understandable and accessible to the mind."

Since experience is necessary for adequate visual development, the essence of visual training is to provide more useful and enriched experiences for the trainee. It takes correlation between two or more senses to add new experience, and seeing assumes a role of the greatest importance. Experience generally depends upon an interaction between one's internal and external environment.

Motion and vision are very closely related. If a child's movements have been unorganized and without any visual direction (as is often the case with neurologically handicapped youngsters), he will be handicapped in the area of visual development, or his visual interpretations will be deficient in meaning. Optometric vision training is concerned with the enhancement of visual performance. If this is improved, it is felt, intelligence and academic success will also improve.

The classroom teacher can identify and help visual problems, if he or she is alert to the signs which may indicate a problem. Some colleges are training teachers in the development of prescriptive teaching, and some school districts have worked out contractual arrangements with a vision specialist. With this sort of help available at school, Heinsen believes that many children may begin to make sense out of the academic demands which make learning a painful experience for them.

Kline, C. L. The adolescents with learning problems: How long must they wait? Journal of Learning Disabilities, 1972, 5, 262-284.

It is estimated that there are eight million children in the United States with severe reading disabilities. The author presents this as a complex problem with social and economic implications. It is his opinion that the existing school system is "irrational, ineffectual, authoritarian, inept, smug, defensive and undereducated."

The findings and recommendations of the Department of Health, Education and Welfare National Advisory Committee on Dyslexia and Related Reading Disorders were published in a booklet entitled, Reading Disorders in the United States. The author presents many of the conclusions and pertinent facts from that study.

There is a wide variety of grouping and characteristics of learning disabilities adapted from the chapter on "Therapy of Learning Problems" in the book, Adolescents, by Sandor, Forand, and Schneers: (1) chronic dyslexics; (2) the mini-effort group; (3) the over-indulged; (4) the can't lose group; (5) the smart big brother group; (6) the afraid-to-be-curious; (7) the emotionally traumatized; (8) the afraid-to-know; (9) the love-to-be-loved group; (10) the psychiatrically ill. Diagnosis should be made by: (1) standardized oral reading tests--he suggests the WRAT; (2) process tests; (3) evaluation of emotional status and personality development by a psychiatrist or clinical psychologist. Family dynamics should be investigated.

The treatment that Kline recommends is the Orton-Gillingham multisensory method, modified for adolescents, as well as part of the Bywaters program of "therapeutic tutoring" for adolescents.

The author presents eight recommendations from the Report of the Joint Commission on Mental Health of Children that he feels could aid in solving some of the problems in the education system.

Kline emphasizes the importance of prevention and early intervention before the sense of frustration and failure is so deeply imbedded and the anger so great that the children can't be reached at all.

Finally, he feels that many programs are not researched thoroughly enough before implementation on a large scale (i.e., open classrooms) and that too much money is being wasted.

Koppitz, E. M. Special class pupils with learning disabilities: A five-year follow-up study. Academic Therapy, 1972, 8, 133-153.

The study was done as a follow-up for 177 children enrolled in a learning disabilities program. They ranged in age from 11 to 17 at the time of follow-up. At the time of admission, the children's mean age was eight years, one month; mean I.Q. was 92. The students presented a great variety of learning and behavioral disorders and differed greatly in social background and in diagnosis. According to the pupils' records, most of them had difficulties in school from the time they first entered, yet most of them had remained in regular classes until they became so frustrated that they had also developed secondary behavior problems.

The findings of the study revealed that learning disabilities cannot be corrected by a specific teaching method or training technique--instructional materials and techniques must be flexible, imaginative, and personalized.

When children showed problems in both visual-motor and auditory perception (or any two or more areas of mental functioning) their disabilities were much more severe and compensation more difficult than when there was only one impairment.

It was found that brighter children can often compensate for their problems on their own without much extra help; average or below students need more help. Special teaching methods can do no more than help a child to function up to the limit of his ability-theycannot speed up the level of his maturation or increase his capacity.

A special class program should not be limited to only one type of class or to one specific curriculum, according to Koppitz. Children should be placed in special classes on the basis of their functioning and needs, not on the basis of diagnostic labels or I.Q. and other test scores.

Classes should be located in regular school buildings. Special class pupils should be integrated into regular school programs.

The author feels that the greatest value of the special classes was their ability to modify the pupils' attitudes and self-concepts, to prevent thedevelopment or increase of secondary emotional or behavioral problems, and to provide a setting where pupils could experience success and progress at their own rate without any undue pressure.

Kratoville, B. L. (Ed.) Youth in trouble. San Rafael, California: Academic Therapy Publications, 1974.

This book is the direct result of a symposium which took place in Dallas, Texas in the spring of 1974, and brought together experts in the fields of education, medicine, psychology, and juvenile justice. All were very much concerned with the problems of juvenile delinquency and its relationship to learning disabilities. There was an overall consensus of opinion that most children who come into conflict with the law, regardless of the infraction, usually have some underlying physiological problem responsible for their anti-social behavior. The failure of teachers, parents, and courts to detect these physical problems, as well as the use of punishment in an attempt to correct the behavior, are greatly responsible for the very high (85 percent) recidivism rate in juvenile offenders.

School problems are almost always evident with these youngsters and unless they are detected, diagnosed, and remediated early, additional severe problems are almost certain to occur. Children who do not fit into the mold or who cannot be reached by the usual methods, have a great deal to offer in their unique way. These students must be allowed to develop at their own pace and must not be turned off to life or to their own potential by a society that doesn't quite know what to do with them.

Some of the suggestions that evolved from the symposium are highlighted. These include: informing educators at the secondary level about the link between learning disabilities and juvenile delinquency; establishing alternative schools and programs to take effect as soon as possible; instituting training programs for probation officers, social workers, juvenile judges, and related law enforcement agencies so that they are better equipped to identify learning problems in the youngsters they deal with; educating parents to the special needs of their learning disabled children so they can better understand their problems and, hopefully, seek help for them; capturing the interest of PTAs and other child-oriented organizations so that they might focus their attention on the "youth in trouble" syndrome; and forcing community action on the part of school boards and legislators to meet the physical, emotional, educational, and vocational needs of the delinquent population.

Postive action must be taken to begin reversing the many wrongs that have been done to these misunderstood children. We must not allow such valuable lives to be wasted in the future.

Kronick, D. What about me? The LD adolescent. San Rafael, California: Academic Therapy Publications, 1975.

The adolescent is an active member of society. He is not limited to the home and classroom as are younger children. Therefore, Kronick believes that a book designed to provide insight and help in understanding this youth must deal with the many types of experiences he might or should encounter. The book is divided into two parts: the first containing eight chapters dealing with the world of the learning disabled adolescent; the second offering several papers designed to provide direction for parents and professionals.

In part one, the author raises questions about the lack of a psychology of learning disabilities. She is concerned with the application of traditional theories to the learning disabled youth; "...what happens to a child whose family has led him to understand that it will protect him. From the comfortable knowledge of this protection, he ventures forth, only to learn that his unstable perceptions, poor coordination, errors in judgment, lapses in memory, and inability to deal with some forms of complexity, create for him a hostile and dangerous world." The child enters adolescence and with it a whole new way of life. How will he handle going from class to class, boy-girl relationships, or having many different teachers?

At some point for many learning disabled adolescents, educational alternatives seem to run out; a natural reaction of many parents is to offer their child a permanent refuge in the home. If he accepts, "he and his family will have chosen a living death." What can the parent do to foster "healthy emotional growth?" Kronick offers pages of examples and suggestions.

Socialization is a very important part of the development of every human being, but how does the learning disabled adolescent fit in; how does he handle it? Can he find a place in the regular social activities of his school? What about school teams, parties, or camps? How does this youth fit in at home or in the community? How should parents handle the daily discipline? What should he be expected to accomplish in school? How should he be handled by the school administration? The author feels that numerous questions exist and she attempts to provide the reader with as many answers as possible.

Part two opens with the concern that many parents have over what will happen to the handicapped child when they are no longer able to take care of him. The author of the paper is an attorney as well as a parent and provides practical suggestions for estate planning.

Employers make provisions for hiring the physically handicapped such as the blind or crippled, as well as the mentally retarded. But what about the learning disabled youth who seems alright but cannot deal with jobs requiring normal perceptions and abilities? How can parents and educators prepare this individual for gainful and meaningful employment? What about college? The author of this paper delineates problems facing this population and some alternative programs which are proving to be successful.

Other papers in this volume include: "The specific LD adolescent -- who is responsible for him"; "Different points of view," a collection of helpful suggestions given to the author for dealing with her own child's problems; and a five part paper concerned with recognition, remediation, and restoration.

Lane, P., & Miller, M. Listening: Learning for underachieving adolescents. *Journal of Reading*, 1972, *15*, 488-491.

It is the authors' belief that reading can be improved through listening and that with learning disabled children, reading can actually be taught through listening. Critical reading can be enhanced through training in critical listening.

The authors illustrate this belief by a study of a fourteen-year-old student who was functioning on a fifth to sixth grade level. He spent one hour, four days a week, for several months with a tutor who read aloud. The child's retention and interest were extremely high and his critical thinking skills improved greatly.

In another situation, a group of learning disabled students were highly motivated by a classroom program in which the teacher read one part of a play aloud to them each day as they followed the reading in their books. They later produced and acted in a play of their choice; this became a very positive learning experience.

According to the authors, learning disabled children respond very well to being read stories and in many cases are able to generalize from these experiences. It is the authors' opinion that if a listening program is incorporated into the general curriculum, it will be instrumental in both raising the interest level and increasing the thinking skills of underachieving adolescents.

Lerner, J. W. Toward a taxonomy of remediation. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

A model of remediation consisting of three types of analysis and nine different categories of remediation has been presented in this paper. The purpose of the analysis is to sort out and classify the remedial approaches that are advised and are used within the field of special education. In a review of each category, the author suggests that while each category has particular merit, each also has certain shortcomings and limitations, and that research has not yet substantiated the value of each approach.

The first three categories of remedial approaches concentrate on analysis of the child and how he functions. The "cognitive processing approach" refers to the knowledge of how a child processes information which in turn suggests appropriate teaching strategies. The sequential stages of development approach postulates that a particular hierarchy of development is observed within normal child growth, that this development is sequential and must be completed at each of the previous stages before the subsequent level can be successfully accomplished. Remediation consists of helping the child to successfully complete his growth at the unfinished phase of development and assisting him in progressing to the next level. The "test-related approach" theorizes that a particular diagnostic instrument provides a system to pinpoint areas that need remediation.

The next three approaches to remediation analyze the subject matter or the content to be learned, rather than the child. In these remedial approaches, the method is the same for all children irrespective of their learning style. The "specialized techniques approach" is presented as being a highly specialized and differentiated way to attack specific learning problems. The "skills development approach" postulated a hierarchy of skills in the subject areas, and it is assumed that by mastering each of the subskills, the child will master the subject. In the "materials approach" the basic decision is as to which publishers' materials to use--the materials themselves become the further decision makers.

The final set of remedial approaches examines the elements of the environment surrounding learning. The "behavioristic approaches" to remediation (behavior modification) are based on principles of reinforcement theory and are used to eliminate undesirable behaviors and to establish specific desirable behaviors, irregardless of the causes of the child's learning problems. "Psychotherapeutic remediation" concentrates on the feelings of the child and his relationship with the therapist in the task of rebuilding the child's ego. The approach of "remediation through pedagogy" takes the view that the most important variable in a child's learning is the teacher and that it is necessary to concentrate on training better teachers.

It is the author's view that a model of remediation is needed--one that would take into account the interacting effects of each of the categories of remediation. Each remedial approach has a contribution to make to the total system of clinical teaching.

MacIlvaine, M., & Cooper, D. Some stories of real people. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

This article presents seven case studies of people with various learning disabilities who overcame them and reached some degree of success. Several have completed college, one is a well known writer, another a well known actress. Several have dedicated their lives to helping children with neurological handicaps, and all have been gainfully employed. The disabilities covered include language disorders, motor problems, problems in visual perception and eye-hand coordination, dyslexia, visual and auditory perception problems, accidental brain injury, and impaired social perception.

In each case the problem, its diagnosis and the compensatory measures taken are briefly described. The thread that holds these stories together is the fact that failure was not accepted by the parents, the professionals, or the handicapped persons themselves.

Maietta, D. F. The role of cognitive regulators in learning disabled teenagers. Academic Therapy, 1970, 5, 177-186.

The purpose of Maietta's paper is to acquaint teachers of learning disabled teenagers with the cognitive regulators (sensing mechanisms) involved in the learning process. It stresses the role of cognitive regulators as the bridge between cognitive styles of learning and the strategies required of teachers when these regulators are not functioning adequately. Youngsters with learning disabilities exhibit a dysfunction in one or more of the basic psychological processes involved in understanding or using spoken or written language. These may involve problems of listening, thinking, talking, reading, writing, spelling, or arithmetic.

The major cognitive regulators involve focal attention, breadth of scanning, extensiveness of equivalence range, and leveling-sharpening. The two major tools for assessing their efficiency at the present time are observation of pupil performance and the use of standardized tests, notably the Detroit Tests of Learning Aptitude. Dysfunctions may be seen in pupil behavior in either visual, auditory, kinesthetic, or tactile sensory inputs or in any combination of these sensory-motor stimuli. Some behaviors that reflect dysfunction of cognitive regulators are described.

In conclusion, Maietta contends that teachers should become more knowledgeable in this area, and more perceptive in their observations. This will improve their effectiveness in selecting the appropriate strategy or learning task for each learning disabled student they encounter.

McClelland, J. Adolescents: It's never too late to learn. Bulletin of the Orton Society, 1974, 24, 141-153.

McClelland objects to a widely held conviction among educators that reading and spelling problems that persist into the adolescent years are unalterable and hopeless. She points out that many of these handicapped students remain in school, despite poor performance and continuous frustration, until they "graduate," posing serious management and behavioral problems along the way. Deterioration of behavior is likely to accompany continuing school failure. "However, some of these students refuse to 'go quietly' and cause a good deal of trouble along the way. They change from eager-to-please, cooperative young children, to frustrated, don't-give-a-damn adolescents."

Evaluation and diagnosis of specific language disability is done by inspection of past records (learning problems start early and persist), writing samples (particularly important), reading (oral and silent), and speaking. From an inspection of a student's writing, the teacher can gain insight into spelling and grammar, as well as conceptual difficulties.

The remainder of the article is devoted to a discussion of various teaching methods especially suitable for the type of student discussed here. McClelland's conclusion stresses that "...success with these students will depend upon our skill as teachers."

McCoy, L. E. Braille: A language for severe dyslexics. Journal of Learning Disabilities, 1975, 8, 288-292.

In this article, braille is suggested as an alternative language for students who are severely learning disabled. The case of Roslyn, a fifteen-year-old girl who could neither read nor write, is presented. In spite of a superior range I.Q., her reading and writing ability could not be improved beyond the second grade level.

Roslyn's problems are demonstrated by the following: "maximum auditory memory of four digits; poor visual digit memory; hazy time concept; continued reversals of letters and numbers beyond age eight; confusion of right-left, east-west; poor fine motor coordination; EEG-borderline brain damage of very questionable significance; poor hand-eye coordination; low WISC Verbal scores; quiet-condition-below 50th percentile on the Auditory Discrimination test; noise-condition-above 70th percentile; and mixed hand and eye dominance."

Within four months of starting the braille program, Roslyn had exceeded her highest previous reading achievement and was beginning fourth grade studies. While there were still problems, for the first time in her frustration-filled experience with education, Roslyn was making progress. This suggests an alternative method of instruction in communication for severe dyslexics.

Muehl, S., & Forell, E. R. A follow-up study of disabled readers: Variables related to high school reading performance. Reading Research Quarterly, 1973, 9, 110-123.

The purpose of this follow-up study was to investigate the high school reading performance of a group of subjects originally diagnosed as disabled readers and to relate this performance to selected variables obtained at time of diagnosis. These include EEG classification, I.Q., chronological age, and parental background. An additional purpose was to determine the effects, if any, of varying amounts of clinic instruction following diagnosis on subsequent reading performance.

At the time of diagnosis, the 43 subjects in the follow-up group were about three grades retarded. The average grade placement at diagnosis was 5th, the average grade placement at follow-up was 10th.

Results showed: (1) poor readers in elementary and junior high school, as a group, continued to be poor readers in high school five years after diagnosis; (2) there was no relationship among EEG classifications at diagnosis and high school reading, although a consistent trend favoring the reading performance of the abnormal-other EEG group compared to the abnormal positive-spike and normal EEG group was observed at both testing periods; (3) WISC verbal I.Q. and C.A. at diagnosis, was significantly and independently related to high school reading. In relation to the below average reading performance at follow-up, the variation in WISC verbal I.Q. obtained at diagnosis, not only was significantly correlated with later reading performance, but in addition, the verbal I.Q. score range better predicted the below-average range in which the reading scores fell than did the performance I.Q.

Results also indicated that early diagnosis, regardless of amount of subsequent clinic instruction, was associated with better reading performance at follow-up.

Murray, T. Individualization of instruction in special learning disabilities resource classroom: A comparative study. (Doctoral dissertation, University of Minnesota) Ann Arbor, Michigan: University Microfilms, 1971. No. 72-14,343

The purpose of Murray's study was to analyze the individualization of instruction by special learning disability resource room teachers. A thirty minute structured observation of fifteen elementary and fifteen junior high school classrooms was conducted by three experts in the learning disabilities area. The four aspects of individualization studied were: the use of grouping techniques, variety of materials, development of pupil autonomy, and differentiation of assignment. Additional efforts were also made to assess the effect of administrative and procedural variables on the freedom of classroom teachers to individualize instruction.

Supervisor ratings of teachers differed significantly from the teacher self-ratings on all aspects of individualization studied. The teachers believed that their classroom practices were more effective than the supervisors did. They reported little administrative interference with their freedom to individualize, yet none of the variables studied (age, sex, years of teaching experience, level of training) seemed to have any effect on the level or kind of individualization. The raters felt that much of the on-going activity in classrooms where the teachers worked with small groups of children should be described as serial tutoring in highly structured and carefully sequenced curriculum.

Pellettieri, A. J. The neurophysiology of learning and pedagogy. Paper presented at the National Reading Conference, St. Petersburg, Florida, December 1970. (ED 056-839)

In an effort to narrow the gap between scientific findings and the work of clinicians, the author exposed clinical cases to recent laboratory findings in neurophysiology and sought to determine some possible relation between the two. Two studies about the operation of the mind in information processing and learning were related to two clinical case studies. The hyperactive child in the first case (C.A. 14.4, M.A. 16+) was partially brain injured. Visual modes of instruction tended to excite him excessively and result in poorer performance. The author proposed that, for this child, an audio presentation of instruction would be preferred.

In the second case study, the child's (C.A. 13.2, M.A. 19.5) slight hearing loss was assumed to have resulted in some distortion of auditory input, and this affected his learning. It was felt that the child's facilitation pattern for coding was not adequately sensitive in order to pick out cultural cords and that for him, the instructional system might be too encumbered.

The author concluded that breaks in learning often stem from physiological processes and that the psycho-educator could well make use of the research findings from the past seven years in anatomy and physiology in order to update pedagogy.

Poremba, C. D. The adolescent and young adult with learning disabilities: What are his needs: What are the needs of those who deal with him? In International approach to learning disabilities of children and youth. Proceedings of the Third Annual Conference, ACLD, Tulsa, 1966.

The author is a psychologist at the Children's Hospital in Denver, Colorado, addressing the Third Annual Conference of the ACLD. He discusses adolescents who have been diagnosed in the later school years as having a learning disability. The need for early detection of learning problems is stressed, and the practice of promoting children to higher grades when they obviously lack the accomplishments is viewed negatively.

Poremba believes we will be finding more of these children in the future due to improved evaluative techniques and also because medicine is saving the lives of infants with various disabilities who will be entering the schools in the coming years. We must have programs ready for these children. Many youths who are considered emotionally disturbed have needs which are not being met by existing school programs. The pressure to succeed in the academic subjects necessary for college creates many hardships for students who should be getting vocational training instead, even at the junior high school level. Both the parents of these children and the children themselves must be made to understand the nature of the disability in order to avoid labels like lazy, obstreporous, stubborn, etc.

The author also believes that compulsory education which forces students to remain in school until sixteen, but which does not meet the needs of children with special learning problems, provides little benefit in terms of preparing them for useful lives in the future. A greater emphasis on manual and technical training at the higher levels of education could prove beneficial.

In the area of juvenile delinquency, Poremba feels that in as many as 50 percent of the court cases he observed, the defendants exhibited specific learning disabilities--often involving reading or math. The need for greater study of this problem is necessary to perhaps change the definition of delinquency and study its relevance to education. Children should be taught how to overcome their deficits rather than to act them out in the community.

What is needed for the future is greater research, resources for training and evaluation of these children, legislation that is sympathetic to their needs, parental cooperation, and most important, a citizenry that understands their problems and is willing to help.

Prawat, R. S., & Gaines, P. Paired-associate performance in normal and learning disabled youngsters. *Psychology in the Schools*, 1974, 149-152.

Two groups of students, one considered successful learners, the other learning disabled, were given a paired-associates test to assess for school learning proficiency. The successful learners were ten college students, 6 males and 4 females, ranging in age from 18.6 to 20.1 years. The LD group had ten high school students, 6 males and 4 females, whose ages ranged from 15.8 to 17.6 years.

Two paired-associate lists containing word pairs (nouns) that were high, low, and moderate in "image provoking value," (according to the Paivio, Yuille and Madigan Norms) were used. The first list contained 24 PAs, 8 at each imagery level. The second included 12 items and contained 4 PAs at each level of imagery. After the 24-item list was administered orally, half the subjects in each group were given instructions in imagery and sentence generation. They were told to either think up a sentence that included both words or make up a picture in their head that combined both objects. The control group was given no additional instructions. After this manipulation, the 12-item mixed list was presented, also orally.

After the first list, students were asked to describe how they tried to learn the associate. Nonelaborative strategies included rote, mnemonic, and verbal association. Techniques which involved mental elaboration were verbal elaboration and imaginal elaboration.

Results indicated that the proportion of subjects in the normal and LD groups who reported use of elaborative strategies compared to nonelaborative strategies did not differ significantly. This does not support the data which indicated that PA performance is related empirically to performance on tests of school achievement. It is suggested that the LD group in this study was not deficient in the type of covert mental activity required for successful performance on such a task.

Additional data showed that (1) the imagery value of word pairs constitutes a significant source of variance for both normal and LD groups, (2) the type of strategy employed does seem related to imagery value, and (3) instructions to elaborate mentally did not make more of a difference for LDs than for normals. This may indicate that LDs are just as adept as normals at spontaneously elaborating input.

Quadfasel, F. A., & Goodglass, H. Specific reading disability and other specific disabilities. Journal of Learning Disabilities, 1969, 1, 590-600.

Conflicting points of view have been expressed by various investigators (teachers, remedial instructors, neurologists, psychiatrists, educational psychologists) concerning the nature, cause, and treatment of learning disabilities. In this paper the authors present some of the conflicting opinions on issues relating to reading disability as a medical entity, the place of language skills among specific endowments and disabilities, and the clustering of symptoms accompanying specific deficits. These issues are considered in light of arguments and observations presented by various writers.

The authors believe that most cases of reading retardation must be understood in the context of variations in talent for the acquisition of special skills. They propose the classification of retarded readers into three categories, excluding those due to an acquired aphasia. The first category is symptomatic reading disability. This occurs in children who suffered cerebral damage before they developed language. The etiology may be known or obscure. There are really other neurological signs, motor and other psychological deficits. There is no family history. Reading errors show distinctive perceptual and associative defects.

The second classification the authors use is that of specific reading disability. This is primarily a deficit of functional organization. No brain lesion is known or suspected to have occurred; there are no localizing neurological signs. The I.Q. is normal. A family history is often elicited. This deficit may occur isolated or accompanied by other specific disabilities. Reading errors show distinctive perceptual and associative defects.

The third category is secondary reading retardation. This occurs in children with normal reading potential. The cause is exogenous, not due to any faulty structural or functional organization of the brain and is secondary to limited schooling opportunities, poor general health, or emotional reaction to environment. The reading errors are nondistinctive.

The authors strongly believe that "one can understand primary or specific reading disability only if one sees it as part of a very common variation of function of the brain which makes one man less apt in doing certain things and gives another man a great ability or talent to do so."

Revelle, D. M. Aiding children with specific language disability. Academic Therapy, 1971, 6, 391-395.

With explicit instruction, most children with specific language disability can achieve enough proficiency in written work to meet the academic requirements of upper elementary and secondary school systems and the daily demands of adult life. Research has demonstrated that learning disabled children have difficulty learning through conventional teaching methods. To successfully teach written communication to these children, certain instructional principles must be observed. The author sets forth these principles based on Orton and Gillingham: (1) begin with the simplest and work up to the complex; (2) break down concepts to the smallest units; (3) provide ample practice so that one concept is overlearned before proceeding to the next; (4) create environment structure and requirements so that the child experiences daily success; (5) keep performance highly structured; (6) training begins with oral discussions which then are converted to the written language; (7) the child should be assisted in going from the concrete to the abstract; and (8) other school assignments should be modified so that they are commensurate with the child's level of performance in written activities.

Revelle illustrates the use of these principles by presenting five steps which the teacher can utilize in assisting the learning disabled child to express himself by writing a cohesive paragraph. It is emphasized that frequent practice must be provided for the child so that the skills acquired are maintained.

Rice, D. Learning disabilities: An investigation in two parts. (Part two) Journal of Learning Disabilities, 1970, 3, 193-199.

This is the second article in a two part investigation. It deals with "implications for school curriculum and program planning." Three questions are raised by the author about school programs and how these programs relate to learning disabilities. They are (1) what parts of the public schools are relevant to the problem of learning disabilities?; (2) which students appear to have significant learning problems?; and (3) what can be suggested as worthwhile approaches to resolve these learning problems?

Rice believes that through the years the goal of educators has been "...a standardized educational prescription to fit all students, with thoughts of flexibility coming only after something seems to have gone amiss." Even in special education programs, he feels greater flexibility is needed to deal more effectively with individual differences and needs. He thinks that too much emphasis is placed on proficiency in reading at the expense of the rest of the student's education. He is also opposed to the schools' great reliance on chronological age as the main criterion for starting a child in school.

The second concerns identification of learning disabled students. They may be referred to as brain-damaged, language-learning impaired, visual-motor perceptually deficient, dyslexic, or as having a specific learning disability. It is estimated that from 10 to 30 percent of the total school population falls in this category. Educators can either create special classes for them out of expediency, evaluating and refining them as they go along, or they can apply all the information that is available about learning disabilities to create a curriculum that is relevant to all students from the very beginning.

Ten suggestions for the resolution of learning problems are offered. They include: developing a true psychoeducational evaluation process; clearly defining the basic purpose of education; educators becoming more involved with preschool education; early identification and prevention of reading disability; permitting students to learn at their own pace, possibly without grades; carefully evaluating the teaching techniques used with disabled learners; carefully evaluating a school's initial approach to reading instruction; examining the effectiveness of remedial reading programs currently in use; exploring alternate ways of imparting information when reading ability is seriously impaired; and finally, considering the efficacy of keeping these learning disabled students in the mainstream of education rather than in special programs where their "differentness" is emphasized.

In conclusion, Rice contends that "...education must move to determine what is relevant for every student from the beginning to the end of his school career, and then develop and apply those curriculums which assist all students in moving toward the true purpose and goal of education."

Scagliotta, E. Reporting the progress of the language disabled child. Journal of Learning Disabilities, 1969, 2, 347-362.

Reporting the functional abilities of the learning disabled student must envelope the broad area of human growth and development including the behavioral, social and emotional, as well as the specific learning attributes and deficiencies.

For reporting student progress to parents and attending professionals, this essay presents three direct and distinct listings of specifics to augment the more generalized inventory of behavioral, social, emotional, physical, and communicative patterns. The primary readiness grouping represents specifics from educational programming geared individually to children from three to seven years of age. The subsequent grouping refers to the intermediate classification of children from ages eight through thirteen. The category of exploratory vocational arts for children fourteen through eighteen completes the catalog of items for report consideration. An actual student progress report for each grouping is included as illustration of content and style.

Schreiber, A. An empirical approach at the secondary level. *Academic Therapy*, 1970, *6*, 5-12.

The author discusses some of the newer modes of teaching which are being employed in an effort to reach more students. Such methods as flexible and modular scheduling, programmed instruction, electronic laboratory-type classrooms, work experience programs, and vocationally oriented courses for the noncollege-bound students are coming into much greater use than ever before.

In learning disability programs, new approaches relying on a psychoeducational team effort, prescriptive teaching, and modifying subject content so that it is tailored to meet the specific needs of a student are seen as the techniques of the future. The teachers in these programs must attempt to build a strong and lasting relationship with their students, and communicate a feeling of empathy and unconditional acceptance of them. The students' strengths must be found and then capitalized upon and the goal of returning them to regular classes as soon as they are ready must always be kept in mind. Reasonable experiences of success in areas of interest will hopefully carry over to deficit areas. It is also most important for the special education teachers to stay in close contact with the regular classroom teachers in order to disseminate pertinent information, as well as to be available for consultation.

The special education program at Capuchino High School, San Bruno, California, is briefly described in this paper by Schreiber.

Scranton, T. R., & Downs, M. C. Elementary and secondary learning disabilities programs in the U.S.: A survey. Journal of Learning Disabilities, 1975, 8, 394-399.

The authors report the results of a nationwide survey which was conducted in order to determine the level of development of both elementary and secondary learning disability programs and, in addition, to solicit reactions from state special education officials concerning any existing discrepancies in these programs.

The data reported reflected programs in 10,358 school districts in 37 states; the remaining states utilized incompatible data classification systems. Forty percent of those districts in the study offered learning disability programs at the elementary level; nine percent offered programs at the secondary level. The results clearly indicate a preponderance of elementary classes.

The disparity between the number of elementary programs and the number of secondary programs is reflected in the philosophies of state education department officials.

The justifications for the lack of secondary programs vary from state to state; many point to a general lack of readiness for secondary programs in terms of available technology, trained personnel, materials, etc. The belief that primary programs, through early identification and intervention, eliminate the need for secondary programs is also widespread. It appears that parental activism and/or specific legislation will be needed, in some cases, to spur the development of learning disability programs for secondary students.

It is pointed out that the Bureau of Education has stated as one of its goals "that every handicapped child is receiving an appropriately designed education by 1980." Based on data collected for this survey, the authors project that programs must grow at an approximate rate of 12 percent per year at the elementary level and at approximately 22 percent per year at the secondary level to reach 85 percent of the governments' expectation by 1978.

Silberberg, N. E., & Silberberg, M. C. Myths in remedial education. *Journal of Learning Disabilities*, 1969, 2, 34-42.

Research in remedial reading which used control groups has consistently shown two outcomes: students who have received remediation test out higher than those who have not, and follow-up studies almost always show that the beneficial effect of this remediation "washes out" in a short time after the remediation has stopped. In spite of this information, remedial and experimental programs continue to flourish. This paper analyzes why, and discusses some of the reasons why the research outcomes are so diverse from the actual programs being developed.

The authors believe that poor programs may be perpetuated either because they totally ignore the research relating to them or because new research is designed to reflect favorably on already existing programs popular with the educational establishment.

There are a number of problems which greatly affect research in this area. One is that so far, no one has come up with a definition of learning disability which has achieved general acceptance from either the researcher or teacher. Another is that often the reader of a study remains unaware of selection factors which may produce biased results. Either they are not described in detail, or the "method" section may not receive the intensive reading that the "results" section does. Another area of confusion can be found in the way learning disabled children are regarded by some researchers. From an overall view they are probably not as neurologically integrated as normal children and their learning difficulties are just another area of performance where this differential brain functioning shows itself.

Criteria which are selected with a view toward pleasing some influential group can seriously reduce the negative implications of the actual findings, and some criteria may not be appropriate to the experiment. Also, statistics can often be misleading.

Several other factors may come into play. Objectivity may be sacrificed when a teacher involved in an experiment feels that the outcome will reflect on his professional ability, and he may attempt to help the children involved in the test. Also, studies which state that "significant differences occurred" are more likely to be accepted for publication than those with a negative (nonsignificant) result. Often, results of experiments cannot be put into effect on a practical level due to financial considerations.

The final area considered is the problem of vested interests. There is no way to estimate how many research studies go completely unreported because their outcomes would be detrimental to the investigator.

In conclusion, the authors believe it would be much more beneficial to allocate educational research funds to new and creative ideas, rather than to continue to expand remedial reading programs which, over the long run, have no effect on a child's reading level.

Silberberg, N. E., & Silberberg, M. C. The bookless curriculum: An educational alternative. Journal of Learning Disabilities, 1969, 2, 302-307.

In our educational system in order to learn a child must read. For those children who are unable to meet this single criterion for learning, education becomes not a matter of receiving knowledge, but rather an experience in developing the skill of reading while delaying the rest of the learning experience. Reading disability exists in all strata of the American society, and depending upon the definition used for a "reading problem," estimates of the incidence of reading problems range from 10 to 30 percent of a normal school population.

The authors report that of seven studies (the only ones available with quantitative data on the long term effects of remedial reading), none showed significant gains as a result of remedial reading.

When it becomes evident that a child is unable to develop efficiency in reading, it should be considered that he can be instructed and educated by some other tool. The correlation between reading success and I.Q. is not high and therefore, because a child is unable to read does not mean he is unable to think and develop other talents and skills. There is a large amount of material for instructional purposes that does not depend upon print. Audiovisual aids can be developed and utilized as an alternative curriculum for children who are unable to develop literacy.

Two years have been devoted to the development of a bookless course in eleventh grade humanities in a Minneapolis high school. The first year was devoted to the development of a standardized and replicable curriculum guide. The course would be given and evaluated during the second year. It will not be considered effective unless evaluation indicates that the students learn at least as much as a control group in a regular curriculum and that they have begun to enjoy learning. Media will be used to teach the concepts within each unit, including: tapes, records, books on records, films, projectors, art, music, role playing, field trips, discussion, guest lectures.

It is the author's opinion that unless we stop paying lip service to the concept of individual difference and begin to formulate alternative educational curricula, we will have made a mockery of the idea of equal education and will continue on a path that is punitive and emotionally stressful for a large number of children who have only failed because they are different from others.

Silver, A. A., & Hagin, R. A. Specific reading disability: Follow-up studies. American Journal of Orthopsychiatry, 1964, 34, 95-102.

The paper describes a follow-up study of children with specific reading disability twelve years after the initial study was performed. It attempts to answer the following questions: (1) Do perceptual defects and neurological immaturities persist into adulthood?; (2) Are there differences in the nature and extent of perceptual and neurological maturation in the various subgroups of reading disability?; and (3) Are there differences in the perceptual and neurological progress of children with reading disability who, as adults, are adequate readers compared with those who are not?

There were 24 children involved in the original study between 1949 and 1951 at the Bellevue Hospital Mental Hygiene Clinic. They were reexamined between 1961 and 1962 with the battery of tests which was used previously. There were 3 girls and 21 boys, with a median age of 19 years. Their IQs (WAIS) as adults ranged from 78 to 118, with a median of 105. The control group was comprised of children with behavior disorders but without reading disabilities. As children, the distribution of IQs did not differ significantly between the two groups but, as adults, the IQs of the control group were significantly higher (P=.01) than those of the reading disability group.

The reading disability group was divided into three categories, the "developmental group," largest numerically, consisting of children displaying the basic syndrome of primary reading disability; the "organic group," smaller in number, displaying the basic syndrome plus evidence of structural organic defect; and the smallest group who, as children, showed no perceptual defects or organic signs as detected by tests.

It was found that in spite of maturation in some areas, specific reading disability is a long-term problem. In the neurological and perceptual areas studied, the control group scored significantly higher than the reading disabled group in almost all areas.

When developmental and organic subgroups are compared, neurological and perceptual differences are not marked in childhood, but as adulthood approaches there is a tendency for those with organic disabilities to retain perceptual difficulties in all areas, while those with developmental disabilities recover partially or adopt cues that enable them to deal with their problems.

The group characterized as adequate readers had fewer perceptual problems as adults than the inadequate readers. However, laterality and body image problems persisted.

It is concluded that the prognosis for the "organic" is not favorable with conventional teaching methods, and new procedures may have to be devised for these individuals.

Sitko, M., & Gillespie, P. Conclusions for speech and language difficulties of the learning disabled adolescent. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

Research on the language behavior of the learning disabled has revealed a wide range of linguistic and speech deficits. With the scarcity of research devoted to the language difficulties of learning disabled there is little to guide educational personnel in developing individualized instructional strategies in speech and language. At best the results of the research reviewed may only provide hypotheses or "in the ballpark hunches" which can be utilized in finding solutions to an individual learning disabled child or adolescents' language difficulty in the classroom. Very little attention has been given to how the environmental and organismic variables studied in basic research affect the complex types of language oriented learning and processing to be found in the classroom. Reliable, valid, and educationally relevant measures of adolescents' language competencies do not exist. Instead we are left with a host of norm-referenced global measures of language aptitudes that have modest predictive validity and virtually no diagnostic validity. In the assessment of language, especially for adolescents, we have a very limited range of standardized instruments, many based on doctrinaire, inadequately researched theories of learning disabilities. Moreover, there is a dearth of criterion-referenced instruments in language for the adolescent.

In all the comparison studies conducted in order to determine the language characteristics of learning disabled children and adolescents, typically a group of individuals have been classified in a certain manner. Categorizing in most cases leads to stereotyping and group characteristics are ascribed to individuals. Often, most of these ascribed language characteristics are communicated to educators without consideration of the interaction among such variables as educational settings, teacher preparation, experimental background, social-cultural factors, emotional adjustment, etc. If programming is to be beneficial, the interaction of the individual with his or her total environment must be considered. If language assessment for the adolescent learning disabled is to be meaningful, more reliable, valid language measures which reflect current linguistic developments and are normed or specific to adolescent populations should be constructed. In addition, assessment should be related to the purposes for which the adolescent has been referred. Language assessment should not be used to categorize or place the adolescent, but rather should be used to enhance the adolescent's learning potential and achievement. The main concern should be one of precise individual, in situ task analytic assessment followed by the selection of a variety of instructional alternatives which take into consideration the needs of individual and situational factors.

In general, there is an extreme dearth of empirically oriented and methodologically sound investigations dealing with speech and language difficulties with the adolescent learning disabled. Furthermore, there appears to be too many gaps in related language research of children designated learning disabled which make it practically impossible to generalize findings based on child LD samples to the LD adolescent population. The literature has been unclear about the exact nature of the linguistic problems of the LD adolescent.

In the authors' view, future language research should explore the exact nature and extent of basic language and/or cognitive processing strategies and language deficits among learning disabled children and adolescents in language-related academic learning situations. There already is strong evidence which suggests that many of the language strategies exhibited by learning disabled children and adolescents appear to be deficient and to reflect primitive and inefficient levels of cognitive and linguistic information processing. Viable models are definitely needed to stimulate and guide investigations of variables and factors associated with individual differences in language behavior (including reading and writing) and language development. It is fruitless to prescribe language remediation and training programs for learning disabled subjects until some understanding of the basic processes underlying the language and speech difficulties of learning disabled children and adolescents is obtained. In essence it is important to determine if linguistic problems associated with learning disabilities are due to performance variables (e.g., short-term memory deficits, attentional deficits, social-cultural-situational factors, motivation, and so on) or to competence variables (i.e., lack of knowledge of specific grammatical, phonological, and/or semantic relationship or rules), or perhaps the interaction of both competence and performance variables.

The authors' own orientation to language programming is discussed in the paper. Their approach is based upon in situ assessment of the child's or adolescent's linguistic strategies and a task-analytic approach to the development of linguistic skills which considers the interaction of teacher, child, material, and situational variables. In addition, the approach views educational programming as a systematic problem solving or decision making process. It also stresses the importance of training teachers to be effective organizers of instruction and child oriented decision makers in order to maximize children's and/or adolescents' use of efficient information processing abilities. In their opinion, teachers who are effectively trained in the competencies which constitute a decision making process will more sufficiently meet the individual linguistic instructional needs of learning disabled children and/or adolescents.

Terrell, A. Writing English lessons for the non-academic adult. Paper presented at the TESOL Conference, New Orleans, 1971. (ED 052-655)

The author emphasizes that despite his nonacademic status, the adult learner comes to a class with deeply rooted convictions about teaching methods and proper classroom procedure. To use an approach which is not in accord with these needs, particularly one which is child oriented, is to forfeit the adult's enthusiastic cooperation. The instructor must find a way to satisfy adult preconceptions about "the proper way to go about teaching and learning without sacrificing teaching effectiveness." In the case of non-English speaking adults, or those whose English is not native and who have struggled with the language, there is also an often unrecognized resentment against the language, and more particularly against a TESOL method of approaching it. If the school is not fortunate enough to have a counselor or nonteaching ombudsman to whom adults can voice their disapproval and concerns, this resentment can destroy even a good program. Affective criteria and confidence are more important in adult than child education.

Though it is difficult to sort out what the adult learner feels to be wrong about his classes, two major complaints against most language approaches stand out: use of materials that look and "feel" child-oriented and emphasis on speaking and comprehending first when he expects reading and writing. Among methodology specialists there is almost universal acceptance of this order; "speaking and understanding must procede reading and writing" as an absolute is rarely questioned.

Terrell feels that using written adult looking materials which, unlike the speaking-first materials can be used for practice at home, will satisfy the student. (And, if he had a tape recorder or records, it would not imperil his proper speaking of the language. If they were going to "internalize errors," daily encounters where English was required would already have ingrained bad habits.)

Oral drills should be based on real life materials. One package that is obviously easy to sell is that of summoning emergency aid. If adults are consulted before materials are packaged, better learning results. The same may be true for children, according to the author.

Tolor, A. An evaluation of a new approach in dealing with high school underachievement. Journal of Learning Disabilities, 1970, 3, 520-529.

Underachievers in this study were subsumed under the label "learning disabled." Tolor investigated the effect of three intervention strategies on perceived locus of control of reinforcement and grades for a group of junior and senior high school underachievers.

The author felt that the student's expectancy of internal (contingent on his own behavior) or external (contingent on external factors and independent of his own behavior) control of reinforcement was an important dimension of underachievement. He hypothesized that: (1) underachievers tend toward greater externality than normal achievers; and (2) underachiever's academic performance will improve as a result of greater internality. Reduction in perceived internal control and a concomittant increase in perceived internal control will result in improved academic performance.

The subjects were 50 students (underachievers) randomly assigned to one of three experimental groups: tutorial, study skills group, and a computer group. All subjects received two 45 minute sessions each week for a period of eight weeks. The author expected the most benefits to accrue to the subjects of the computer training group.

The results indicated that the relationship between externality and underachievement was not significant (did approach significance for the subject) and also that significant increases in internality were found for the tutorial and study skills group, but not for the computer group. Academic gains were not reflected in improved grades for any of the three groups.

Weiner, P. S. A language-delayed child at adolescence. Journal of Speech and Hearing Disorders, 1974, 39, 202-212.

This paper is a case study of "Art," a sixteen-year-old boy first seen 12 years earlier because of his severe language difficulties. Current measures of his speech and language intelligence, reading achievement, and personal-social adjustment provide evidence of continuing deficits in the major language-related areas--speech and language, verbal intelligence, and reading. These deficits seem to have had adverse effects on his communication, educational achievement, and social adjustment.

The author's purpose for describing Art's case was to demonstrate that problems worthy of study arise from a consideration of the later functioning of language-delayed children. Many questions are suggested by his continuing difficulties, the most obvious is that of the frequency with which language-delayed children retain speech and language problems as they approach adulthood. Similar questions present themselves in relation to the children's use of language in the numerous areas of life in which it is important. Are there always difficulties in solving verbal intellectual problems or in reading when structure is deficient? What is the relationship between structural adequacy and adequacy of use?

Art's academic difficulties, coupled with his high functioning in the vocational training aspects of his school program, pose the problem of the nature of an appropriate education. Specialized clinical techniques need to be specifically directed to the problems of the language handicapped. However, the most useful program for such children must go beyond speech and language--educational, vocational, emotional, and social aspects of adjustment need to be considered.

Weiss, H. G., & Weiss, M. S. *A survival manual: Case studies and suggestions for the learning disabled teenager*. Great Barrington, Massachusetts: Treehouse Associates, 1974.

The purpose of this publication is to offer parents and educators alternative methods of teaching and helping adolescents with learning disabilities. In order to combat self-perpetuating feelings of failure and inadequacy, the authors present a student-centered approach in which these students become involved in diagnosing and overcoming their disabilities. All involved in the process must realize the importance of proper motivation and options other than total success or total failure.

The authors have developed the following functional descriptions of adolescent learning disabled students: "they exhibit a marked discrepancy between their level of ability and their educational achievement--there is often wide variation in achievement from subject to subject; they are often characterized by an attitude of disinterest and low motivation for academic tasks; their overall record generally shows consistent failure despite average to superior ability; in essence their school experiences have totally failed to meet their needs; the older the youngster, the more difficult it is to ascertain his specific educational pattern and the more likely he is to have built up inner emotional defenses."

In Part One of this manual, the authors present a series of case studies of adolescent students with various learning disabilities in order to illustrate ways of diagnosing, remediating, motivating, and assisting these youngsters in their specific needs. Among the specific disorders illustrated in the case studies are: writing problems, problems in verbal expression, auditory processing problems, spelling problems, directional confusion and spatial disorientation, overall education lag, and disorganized skills. The authors make recommendations to encourage learning strengths and to increase awareness of many different styles of learning.

In Part Two of this manual, the authors **describe** many medical related conditions that often correlate with specific learning difficulties and poor achievement in school. Reproduced here is a checklist that may be utilized by teachers to gain insight into students' problems. One of the authors' main points is the importance of awareness of the kind of behavior suggestive of specific learning disability as opposed to emotional difficulties.

Presented here are examples of alternative styles of learning in the classroom and ways that teachers can accommodate the student who is unable to learn in the traditional ways. Also included are techniques the authors feel are effective in developing reading associated skills that can be worked into any subject class.

The authors present a table of characteristic learning disability patterns displayed by adolescents--how these symptoms are seen at home and at school, suggested remediation techniques, and suggested ways to relieve intense academic pressure on the student while remediation is undertaken.

There are the following four appendixes to this manual: Appendix one--Definitions of a Learning Disabilitation; Appendix two--Annotated Index of Tests and Measurements for Teacher and Professional Use, Grades 6-12; Appendix three--Bibliography of Alternative Reading Materials, Short Story Collections; Appendix four--Bibliography of Books for Parents and Teachers.

Wiederholt, J. L. Adolescents with learning disabilities: The problem in perspective. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

Though the major emphasis in the field of learning disabilities has been on difficulties of younger children, the area of adolescent learning problems is becoming more and more important. Children earlier identified as learning disabled are now entering high school. Moreover, the field has generated its own considerable momentum. And, more importantly perhaps, the realization has grown that many learning disabled pupils cannot be "cured."

In the twelve years since Dr. Samuel Kirk's well known conference address to parents of perceptually handicapped children resulted in the formation of the Association for Children with Learning Disabilities, the field of learning disabilities has attracted over seven thousand professionals and become the second largest in special education. One major growth spurt followed the "Learning Disabilities Amendment" to Title VI legislation in 1969. Another, two years later, was provided by the Bureau of Education for the Handicapped, along with projects for research and teacher preparation programs. Very recently, the bureau has turned its attention to learning disabilities of adolescents, and a state-of-the-art report has just been produced.

Basically, the field of learning disabilities in the past twelve years can be described, according to Wiederholt, as in an "integration phase." It is during this current integrative period that the earlier investigations of physicians (1800-1930, "the foundation phase"), and the remedial procedures developed by psychologists and educators (1930-1960, "the transition phase"), are being organized and unified as the field of learning disabilities. How this is carried out will have an important bearing on emerging issues, especially definition, territorial rights, assessment and instruction, and teacher competency.

In the area of "definition," there is a continuum of views ranging from those Wiederholt refers to as "purists," who believe that handicapping conditions are obvious to clinical analysts, and the "generalists" who view learning disabled youngsters "as any pupils experiencing school failure who do not fit any other category of exceptionality." Wiederholt does not anticipate agreement on problems of definition in the next few years. Another issue, which he has labeled the "territorial rights" issue, has caused confusion between regular classroom and special education teachers, who have to "share" the responsibility for the education of learning disabled students.

The third issue, involving assessment and instruction, is also a focus of controversy. The concentration in the early 1960s on perceptual and psycholinguistic processes, rather than on academic achievement, has come under increasing fire in the 1970s. Resolution of disagreement in this area is important to the theoretical and organizational development of the field.

Obviously all three of the above issues contribute to the lack of definition of the area of teacher competency. The nonstandardization, resulting from different points of view in teacher training institutions, results in uneven preparation, with some teachers regarded as "clinicians" and others as "consultants."

To aid in the resolution of these four areas of conflict within the field, Wiederholt proposes attention to five factors which he sees as important to the successful implementation of secondary school programs. These are: (1) administrative leadership, (2) group decision making, (3) restricted definition, (4) careful evaluation, and (5) in-service teacher preparation.

Wiederholt believes that strong administrative leadership at the state, board, district, and building levels is of critical importance. However, this must be an outgrowth of group decision making in which professionals, students, and parents have some input. At the district level, a planning committee is an important first step in putting together a secondary program, and this must include representatives from the larger community outside the school itself.

In the initial phase of this program, a limited, perhaps to three percent incidence, definition of learning disabilities should be applied. A large population would make funding and planning a specific program very difficult. This would aid in meeting the fourth criterion as well--a thorough evaluation of the program.

Finally, Wiederholt sees a strong in-service approach as essential to the development of adolescent learning disabilities programs. Special education teacher programs, at present aimed mainly at preparing teachers for younger children, have not equipped enough teachers to deal with the special problems posed by learning disabled adolescents.

Wiig, E. The emerging LD crisis. Journal of Rehabilitation, 1972, 38, 15-17.

Some problems of the college or working-age LD student are considered in this paper. These individuals are often hampered by their ineptness in social situations, possibly caused by a problem in perceiving social cues. Other characteristics include a poor attitude toward work and the unwillingness to ask for help or directions. Verbal and visual memory may be impaired as often as the ability to interpret spatial cues. All of these factors negatively influence the ability to perform specific academic and vocational tasks.

Early remedial intervention into the various perceptual problems associated with minimal brain dysfunction has produced significant results. However, it is generally observed that the rate of performance in these people is reduced, especially in tasks requiring high level perceptual or motor skills. Academic or vocational failure or frustration may result unless specific adaptations are made in time requirements. Similarly, substantial performance in writing and adequate reading ability are needed for success in most areas, and in the case of college admissions, a foreign language requirement is often expected. For the person with learning disabilities, these are generally barriers to college admission, unless a special exemption is made.

The author presents the idea that a prevention program, rather than one based on exemptions, would be an effective way of dealing with the problems of LD college students. Suggestions include: (1) a questionnaire to identify early learning problems, (2) administration of a foreign language aptitude test, and (3) an aptitude test for mathematics, and possibly an intelligence and memory scale where indicated. In some cases exemption from the subject may be indicated, and in others, adaptation of educational methods may be called for. This might include the taping of lectures, use of a class secretary to take notes, use of programmed self-paced instructions, use of oral or taped exams requiring oral responses, tutoring programs, and use of recorded texts and books for the blind.

In the area of vocational and prevocational training, the author believes the emphasis should be on identifying and developing areas of strength in the individual, not on remediation of deficits. Testing for interests, aptitude, achievement, intelligence, and personality is valid; however, interpretation should be done by a learning disabilities expert along with the counselor or psychologist. Areas of strength should be matched with professional requirements. A team approach to vocational counseling also seems warranted in completing a job analysis for vocational placement since the LD student does not fit any of the standard vocational handicap categories.

Areas for change involve assessment, counseling, college requirements, and vocational possibilities. Potential employers and college administrators must be educated to the needs of people with learning disabilities, as must be vocational counselors in the high schools and in industry. New vocational areas must be explored as well before we can deal effectively with the learning disabled adolescent and young adult.

Wiig, E. H., & Semel, E. M. Logico-grammatical sentence comprehension by adolescents with learning disabilities. Perceptual and Motor Skills, 1974, 38, 1331-1334.

This study was designed to evaluate whether logico-grammatical sentence comprehension deficits could be identified in learning disabled adolescents by using a set of 50 experimental sentences designed by the authors and by comparing performances to existing normative data for age peers. The study was also designed to evaluate whether concurrent validity existed between the experimental test and a widely used test of psycholinguistic ability (ITPA).

Subjects were four females and twenty six males with learning disabilities diagnosed by a psycho-educational team. They ranged in age from 12 years 4 months, to 16 years 1 month, and attended middle class suburban public schools in grades six to nine. I.Q.s ranged from 88 to 119. All exhibited academic retardation in one or more areas, normal auditory acuity, and articulation ability, and none received speech or language therapy.

Results showed that a significant proportion of children with learning disabilities exhibit quantitative reductions in comprehension of logico-grammatical sentences. Findings also suggest that concurrent validity does exist between this receptive language test and the ITPA. A variance interpretation of the single correlations indicates that the unexplained variance in the performance on the logico-grammatical sentence test ranged from 65 to 86 percent. It is therefore suggested that the present test measures abilities which are only partially assessed by the ITPA. The authors believe that their test may be used to assist in a comprehensive differential diagnosis of adolescent learning disabilities.

Ysseldyke, J. Process remediation with secondary learning disabled children. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

Ysseldyke observes that an emphasis on process disorders is apparent in almost all the learning disability literature, and the result of this "has led to wholesale efforts to remediate those processes." Most of these remedial efforts have been at the free school and elementary school level, and "the very idea of process remediation with adolescents is quite literally a kind of conceptual quagmire."

The lack of reports on studies to remediate processes with learning disabled adolescents is to be expected, for theoretical and practical reasons. It is widely agreed that processes underlying learning have matured at least by age fourteen. And on the practical side, processes have to be identified before they can be remediated, and few measures of specific processes are designed for children above the age of ten years. There is the further question, of course, as to whether such processes exist.

Though mainly concerned with younger children, much effort has been expended "to delineate the psychological and/or developmental processes believed essential to learning." These include a variety of cognitive processes, perceptual processes, language or pscholinguistic processes, and attentional processes. And in nearly all cases, according to Ysseldyke, the identification of specific process difficulties has been largely post hoc, with tests often constructed for adults and nearly always without any theoretical basis. Deficits are test identified and even test named, and correlational factors between "process" deficits and academic failure are often mistaken for causative factors.

If process remediation is to be attempted at the secondary level, educators will have to define these processes more successfully than studies were able to do at the elementary level, and moreover, prove that they continue to develop into adolescence. Growth in different processes or abilities, or the absence of it, appears to depend on which processes are being considered and the test instrument used to measure them. Early studies indicate, for example, that "80 percent maturity in specific processes" is reached at ages ranging from twelve (for "perceptual speed") to over twenty (for "word fluency").

It is widely agreed, Ysseldyke notes, that the greatest discrepancy between rates and styles of learning for elementary level and secondary level students is the result of differences in the amount and condition of past learning. It is possible that the adolescent experiencing reading difficulties at the secondary level may be significantly hampered more by continual failure, with negative conditioning to visual/verbal stimuli, than by "processing difficulties." And this dissatisfaction may generalize to the classroom teacher.

Ysseldyke believes that at present we do not have the necessary knowledge and materials support to remediate processes, even if they can be shown to exist. Remedial education is directed toward remediating something. If we do not know what the something is, we cannot begin to approach the problem.

What educators should do, he believes, is to stick to curricula and use validated task analytic procedures. Additionally, much scientific effort must be expended on identifying, "reliably and validly, those processes which may be relevant to learning and to establishing empirical links between observed differences in children and the relative effectiveness of different instructional strategies, materials, techniques and programs." Such efforts, Ysseldyke feels, can best be expended at the younger age levels.

Chapter IV

Career Education for the Secondary Learning Disabled Student

Brutten -- Vocational education for the brain injured adolescent and young adult at the Vanguard School.

Colella -- Career development center: A modified high school for the handicapped.

Irvine -- Exploratory occupational education for learning disabled adolescents.

Kameny -- Prevocational retraining: A behavioral task-centered approach.

Lurie -- Experience and potentialities in vocational rehabilitation services.

Martin -- Prevocational services for secondary-school children with learning disabilities.

Schweich -- The development of choices -- an educational approach to employment.

Sundberg -- Vocational rehabilitation cooperation in school.

Weening -- Program development for the learning disabled.

Williamson -- Career education: Implications for secondary learning disabled students.

Brutten, M. Vocational education for the brain injured adolescent and young adult at the Vanguard School. In International approach to learning disabilities of children and youth. Proceedings of the Third Annual Conference, ACLD, Tulsa, 1966.

The Vanguard Upper School is designed to prepare teenagers with learning disabilities for entry into the job market as worthwhile people with a valuable skill. The students are unable to keep up with their peers in a normal classroom setting and are referred either from primary special ed classes or normal classes where they had received remedial help. The philosophy of the school is that the learning disabled youngster in his teens is capable in some line of endeavor, and that the special educator must locate, identify, and nurture this unhindered capability and help the youngster bring it to fruition. The encouragement of a teenager's ego development is felt to be every bit as important as developing skills in deficit areas. His areas of aptitude, interest, and high level motivation are exploited in an attempt to resolve underlying deficiencies and achieve success.

An integral part of the program is the vocational rehabilitation and guidance service. It is felt that in our changing society many opportunities in technical and preprofessional fields will be opening up, and that people with learning problems can be trained to fill these positions. In occupations such as data processing, library science, public health, and space exploration, lower level jobs which are methodical and repetitive in nature rather than creative and abstract, will not call for college level personnel and may be handled by these LD students with the proper training.

The job of the vocational counselor is to match job requirements with a student's aptitudes and abilities. The Vanguard Career Guidance Center has created certain prototype testing models which simulate realistic work demands and conditions, and these models are being consolidated into a formalized job evaluation battery. The student is given a programmed experience which is in essence a control apparatus where he has an opportunity to advance through carefully graduated life experiences without the possibility of suffering failures that trigger frustration reactions.

Use is also made of a simulation laboratory: substituting a synthetic environment for a real one so that it is possible to work under control laboratory conditions. This provides an objective picture of the patterns of difficulty and suggests areas for remedial action. "Gaming" is another technique which is often employed to gain information about the student's capacity to handle interpersonal relationships, especially with authority figures.

The overall objective of the Vanguard Career Guidance Center is to demonstrate that the workshop setting can serve as a major strategic step towards advancing the rehabilitation program of the disabled youngster. The emphasis is on building personal and social qualities and helping students to reconcile their attitudes towards their choice of occupation and their future adjustment to the working world. Training occurs in fields which show considerable growth potential and hold promise for entry level jobs. Flexibility and adaptiveness, as well as ready transfer of skills will become necessary characteristics of the new labor force.

Colella, H. V. Career development center: A modified high school for the handicapped. Teaching Exceptional Children, 1973, 5, 110-118.

In Nassau County, New York, the Board of Cooperative Educational Services operates one of the nation's few modified high schools for handicapped adolescents. Called the Career Development Center (CDC), the school enrolls 265 students, ages 15-21, who have been labeled brain injured, learning disabled, or emotionally disturbed. All have a history of academic failure, poor school adjustment, and behavioral disorder. The underlying purpose of the CDC is to prepare adolescents to adapt to the environmental stress of daily living. The premise is that deviant behavior is capable of being modified and that through concrete and success oriented activities students can be motivated toward change. Some of the offerings of the school are performing arts, outdoor education, practical sciences, driver education, horticulture, technical trades, etc. In contrast to many ongoing special education programs, the center attempts to prepare students to return to the community.

The basic assumption is that these students want success and approval. Therefore, the attitudes and behavior of the staff, not those of the students, are the first to be modified. The environmental circumstances also are altered so that the student himself will want to change. The student's week is made up of 40 periods of instruction--18 in occupational education, 12 in core subject academics, and ten hours of enrichment which involves a variety of electives; the school day is six hours long.

The work experience counselor acts as the central liaison between industry and the school. He very often creates job opportunities where none existed previously and serves in a counseling capacity for both the student and the employer.

One of the electives available is outdoor education, a two day camp experience which has proved to be of great value to the student's growth in making friends, breaking dependencies, developing attitudes of cooperation, and creating feelings of good will which is carried over into the classroom.

The philosophy on testing is that it is important that youngsters prove their value to themselves, not to educators. "Testing should only occur where one needs information that cannot be gained in any other fashion, and where one has an applicable need for such information."

Parent participation is encouraged in group learning experiences which are supervised and guided by a professional staff. The goal of these group sessions is the fostering of meaningful group interaction.

The success of the program may in part be measured by the fact that average daily student attendance has risen considerably. Another benefit of the Career Development Center is that it has fostered an attitude of mutual responsibility for the student between the program and referring school districts.

Irvine, P. Exploratory occupational education for learning disabled adolescents. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

The literature contains very little that will help school systems to develop occupational programs to serve learning disabled youth. Little attention has been given to the exploratory phase of occupational preparation, that phase which gives the pupil enough experience in one or more occupational fields that his teachers can determine what occupation appears most suitable on the basis of demonstrated abilities, aptitudes, and interests, and what training program is most appropriate to enable him to achieve the selected occupational objective. The purpose of Irvine's paper is to describe such a program.

The model used is the Exploratory Occupational Education (EOE) Program developed by the Board of Cooperative Educational Services (BOCES) of Putnam and Northern Westchester Counties, New York, a regional public school agency serving twenty one public school districts. The program serves approximately 320 pupils each year in a recently constructed building. About one-half of these pupils attend special classes operated either by BOCES or the home school districts and the other half are enrolled in regular school programs in the participating school districts.

The EOE program is designed to serve learning disabled students and pupils with other types of handicaps. Intelligence levels typically range from moderate mental retardation to bright normal, and academic achievement in school subjects from first or second grade to senior high school level. Class size is generally limited to ten. Pupils are usually admitted at fifteen or sixteen years of age and must have demonstrated a level of maturity that suggests they are ready to begin the process of occupational preparation.

Pupils attend the EOE program for one-half of each school day, divided between occupational instruction in a shop setting and conducted by a vocational teacher, and related academic instruction provided by a special education teacher. While an occupation is being explored in the shop, the related academic instruction focuses on the vocabulary of the occupation, the mathematics and reading skills needed, and a study of the occupation itself. The shop and classroom areas are adjacent to each other so that communication is fostered between the two teachers who must function as a team. The eight occupational areas are metal trades, automotive trades, building trades I, building trades II, office occupations/distributive education, food trades, cosmetology/health, and agriculture occupations.

Much of the success of the EOE program can be attributed to the use of vocational teachers who provide the occupational instruction and special education teachers who provide the academics, as well as to the fact that they teach in adjacent spaces. It is clear that the program administration must include expertise in occupational education as well as knowledge of how to educate pupils with learning problems.

Kameny, A. Prevocational retraining: A behavioral task-centered approach. In Management of the child with learning disabilities. Proceedings of the Fourth Annual Conference, ACLD, New York, 1967.

Neurologically impaired individuals who have great difficulty in writing often present problems for those involved in their vocational training. These people require prevocational programs in order to help overcome this handicap. In this paper the author describes such a program.

Evaluation of the brain disorder--its nature and severity--is the first step to be taken. It must also be determined which is more disabling to the person, his impairment or his reaction to it. His areas of strength must be found. Clients are then scheduled for two sessions weekly for four weeks and are given tasks which involve visuo-motor, perceptual, and cognitive functions; their methods of approaching these tasks and their response to failure are carefully observed. The attitude of the vocational worker should always be positive and supportive, and his aim is to help the client raise his performance to an optimum level.

In the area of handwriting, the person with a neurological impairment often makes it harder than necessary on himself. He grasps the pencil too hard and presses on the paper with excessive pressure; this causes him to break the point, tear through the paper, and often drop the pencil. The more stress he feels in performing his task, the more his spasticity increases. By replacing the pencil with a paint brush with which a mark can be made with a minimum of effort, a change is effected. There is an immediate reduction of tension as well as a freedom of movement, which will allow the individual to learn to paint words without fear. When he returns to writing with a soft pencil, his performance is much improved. In many cases, success in this area carries over into other areas demonstrating a learning-how-to-learn effect.

Lurie, S. Experience and potentialities in vocational rehabilitation services. In Management of the child with learning disabilities. Proceedings of the Fourth Annual Conference, ACLD, New York, 1967.

The author points out that it is important to recognize the changes in the philosophy and services provided by vocational rehabilitation programs since the programs have broadened from their beginnings when they stressed the economic worth of the individual and his economic contribution, a recognition of the rights and potentialities of disabled persons, and a consideration of the complicated problems of social and psychological adjustment connected with any disability. Services grew to include "any services necessary to render a disabled individual fit to engage in a remunerative occupation."

In New York State, the services provided by the Division of Vocational Rehabilitation include: (1) evaluations--medical, psychological, educational, social, and work; (2) training--sheltered workshop through college and graduate training, personal adjustment training; (3) placement; and (4) counseling.

The Division of Vocational Rehabilitation's experience with the brain injured population has been that they usually have other disabilities as well, such as mental retardation, emotional disturbance, maladaptive behavior, cerebral palsy, and epilepsy. These youngsters have been put into personal-adjustment training programs where they will be trained for employment as an institutional aid, a messenger, or for placement in a terminal sheltered workshop.

The author feels there could be much benefit from a developmental vocational study of a brain-injured group. If it were found that certain experiences necessary for vocational development were lacking in existing programs, additional courses could be developed, which would provide simulated experiences to help with a smoother transition into the working world. These experiences may be in the nature of work evaluations, socialization experiences, personal adjustment training, and the obtaining and utilization of information about vocational options. Specialized services, such as those offered by the Division of Vocational Rehabilitation, can help the individual to gain and maintain feelings of worth through personal development and contributions to the working world.

Martin, C. L. Prevocational services for secondary-school children with learning disabilities. In Management of the child with learning disabilities. Proceedings of the Fourth Annual Conference, ACLD, New York, 1967.

When establishing a cooperative program of special education in sixteen of Chicago's West Suburban School Districts in 1955, it was agreed that high schools must assume their responsibility if a quality program was to be built. As initially organized, three high school districts and 13 elementary districts served only the mentally retarded and the blind.

From that beginning the program has grown to provide services which include an infant education program for the hearing handicapped, the Evaluation and Training Center, and the Prevocational Services available to all vocationally handicapped young adults through age 21.

The prevocational program begins with referrals from junior high school. These are pupils who may have participated in some special education program at the elementary or junior high level. Students receive intensive training in the procedures involved in applying for employment; home arts as well as industrial arts instruction is provided.

In school, work experience is the initial step in a series of progressive experiences offered to students in the prevocational program. Work in the community provides students with the opportunity to earn a salary while learning.

Responsibility for final job placement or advanced vocational training rests with the Illinois Division of Vocational Rehabilitation. To insure an adequate vocational adjustment on the part of students in the program, follow-up services are provided until students reach the age of 21.

Schweich, P. D. The development of choices--an educational approach to employment. Academic Therapy, 1975, 10, 277-283.

A program of occupational academics has been designed and developed by the staff of Archway School, Brooklyn, N. Y., to improve job opportunities for non-college potential learning disability students. Working on the assumption that the purpose of education is to make one self-sufficient, a highly specialized work-study program for students 17 and older was developed. Its objective is employment in a productive position, making the most of each student's strengths and abilities.

The program runs four semesters. The first is strictly academic, including reading, math, language arts, and occupational studies. The next three semesters include these academics in the morning and begin job placement in the afternoon. The goal of the program is not reeducation, but rather reorganization into usable form of what has already been learned.

Since the ability to coordinate knowledge and to be flexible in adapting to job changes is of greater value than knowledge of many uncoordinated skills, an "educational" rather than a "training" approach to employment is stressed. All learning concentrates on skills applicable to clerical and semiprofessional occupations. Curriculum instruction includes videotape seminars, peer-mediation, employer-student workshops and one-to-one teacher-student training. Instruction begins at a sixth grade reading level with the expectation of one year's progress by the end of the program. Two areas which are greatly stressed are time--how quicky one can perform his job, and communication skills.

The program has been in existence for two years on an experimental basis and has met with considerable success in placing students in appropriate work situations.

Sundberg, N. Vocational rehabilitation cooperation in school. In L. Anderson (Ed.) Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

The author describes a program in which the California Department of Rehabilitation and the Novato Unified School District work together in a two part system. Part one is a special education unit run by the school. Part two is the vocational rehabilitation unit, staffed by the school district and the Department of Rehabilitation. Key personnel are the program coordinator, vocational rehabilitation counselor, and the work coordinator.

Participants in the program come from LD classes or upon recommendation from school counselors. Rehabilitation arranges for a general medical exam and, if indicated, neurological or psychiatric testing. Vocational testing is also administered. Once accepted, some students are set up in a work experience, others who are carrying a full academic schedule and are doing fairly well, are not. For them, the value of the program lies in the vocational testing and the vocational guidance available upon graduation.

There are two categories of work experience at Novato High School. One is the Learning Lab in which students are put in a work situation within the school district (e.g., cafeteria, library, school warehouse). These are purely evaluative jobs and the student earns five units of credit for each two hours worked. The other is called Occupational Education. It covers true on-the-job training in the field the student will pursue, or part-time attendance at school and part-time attendance at a vocational or trade school. It carries five units of credit for each school period replaced.

Fees for vocational rehabilitation services are based on how much a family is able to pay, although the preliminary testing is done at no cost to the client. The most important aspect of the program is believed to be the continuing concern and help the student receives after graduation or after he leaves school. He is followed for a full year beyond high school and, if more help is needed after that, he is transferred to a regular rehabilitation counselor.

Weening, C. A. Program development for the learning disabled. In Progress in parent information, professional growth, and public policy. Proceedings of the Sixth Annual Conference, ACLD, Fort Worth, 1969.

Vocational rehabilitation today is involved in four main areas: the medical, psychological, social, and vocational problems of a given individual. Each state currently has a vocational-rehabilitation agency which administers its own program, and provides such services as diagnosis, restoration and training, placement, and follow-up. Counseling continues throughout all programs.

Until recently, services to those with learning disabilities were based upon whether or not the individual was emotionally disturbed, mentally retarded, or perhaps having a convulsive disorder. The main stumbling blocks were that many vocational-rehabilitation people didn't really understand learning disabilities, and the lack of resources.

New Jersey has developed a successful program of vocational training for learning disabled youngsters. It took an all-out effort on the part of interested people to convince the state agency that there was a great need for aiding the state's estimated 3,000 students (1966) requiring special education. This article describes the step-by-step procedure used in getting the state to approve a proposal to include the neurologically impaired in their programs. The agency was convinced that there was an impending wave of potential clients with this disability and they faced the lack of resources by approving the proposal and assigning special counselors.

The author believes that just as it was parents who provided the impetus for special education, it should also be parents' associations who do the same for vocational rehabilitation for children with learning disabilities.

Williamson, A. P. Career education: Implications for secondary learning disabled students. *Academic Therapy*, 1974-75, *10*, 193-200.

The author feels that career education (relating academic subjects to career options, encouraging personal growth, and instilling the desire to join the work force) has not been properly geared toward the learning disabled student in the secondary school. For years this student has been directed toward vocational training and away from the academic curriculum. The author feels, however, that the learning disabled youth might have profited more from academic instruction with curricular modifications; and vocational training might have developed a stigma from being so closely associated with the handicapped students, causing more capable students to steer clear of that area even though it might have proven beneficial to them.

Career education programs for learning disabled students should be heavily supplemented with basic literacy skills, including remedial reading. They should offer many options and not exclude the possibility of college. Curriculum emphasis must capitalize on the areas of strength, which in turn should be matched with jobs or professional requirements. Many colleges are accepting students by grade points in strong areas and are willing to grant exemptions in the areas of impairment. Since the student with learning problems often has resulting emotional problems as well, the program should also be geared toward helping him adapt to the stresses of daily living and working. By emphasizing the development of decision making abilities, problem solving techniques, and personal growth rather than simply developing proficiency in a particular vocational area, the student will be able to adapt to numerous career opportunities as they present themselves.

Further study in this area should include research to determine the effectiveness of career education with learning disabled students, what type of program is best, when it should be started, how well these students adapt to college, etc. The author believes that the United States Office of Education and other funding sources should be made to see the need for allocating money for research in this area. Estimates range between 2 percent to 30 percent of the total school population has some degree of learning disability. This size group, it would seem, deserves to have materials designed and field tested especially for them. Employers will need to be educated to the nature and needs of the potential employee with disabilities. Finally, students should be allowed to investigate human service vocations as well as technological areas, since these require a minimum of proficiency in high level perceptual and motor skills.

Chapter V

Learning Disabilities and Juvenile Delinquency

Berlin -- The police badge and the NH child.

Berman, Siegal -- Delinquents are disabled: An innovative approach to the prevention and treatment of juvenile delinquency.

Dorney -- The effectiveness of reading instruction in the modification of attitudes of adolescent delinquent boys.

Hogenson -- Reading failure and juvenile delinquency.

Hurwitz, Bibace, Wolff, Rowbotham -- Neuropsychological function of normal boys, delinquent boys, and boys with learning problems.

Margolin, Roman, Harari -- Reading disability in the delinquent child: A microcosm of psychosocial pathology.

Mauser -- Learning disabilities and delinquent youth.

Miller, Windhauser -- Reading disability: Tendency toward delinquency?

Mulligan -- A study of dyslexia and delinquency.

Mulligan -- The NH adolescent and juvenile law.

Rice -- Educo-therapy: A new approach to delinquent behavior.

Silberberg, Silberberg -- School achievement and delinquency.

Tarnopol -- Delinquency and minimal brain dysfunction.

Berlin, W. H., Jr. The police badge and the NH child. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

The author of this article, as police chief of a small California city, discusses acting out behavior and how it often brings children in conflict with the law. Youngsters act out because they don't believe that they're equal to other children. They are seeking compensatory gratification and protesting their inequality when they display antisocial behavior. He suggests that it is universally agreed within law enforcement agencies that children should not be incarcerated or institutionalized if there is another way to solve the problem.

Four cases are presented which involve neurologically handicapped juveniles in various infractions of the law. In one case, a police officer was alert to the fact that a ten-year-old boy was in the company of several seven-year-olds when he got into trouble. The officer requested that the youth write a simple sentence and copy some designs. When he was unable to do so, the officer recommended that he be tested and it was revealed that he was a neurologically handicapped child. Therapy and training were initiated.

In another case, a brother and sister, seven- and eight-years-old were truancy problems. A visit to their apartment by the investigating officer revealed aimless scrawling all over the walls--no pictures or words. He recognized that these children were performing below their age-achievement level. Testing confirmed that they both had neurological problems as well as emotional difficulties.

A reverse reaction to a drug was the clue that a fourteen-year-old girl might have a neurological impairment in the third case. It sometimes happens with this handicap that small doses of a drug will have this effect, but large doses will produce a normal reaction. In the author's view, it appears that for every one girl with neurological handicaps, there will be nine boys, and that both boys and girls in their acting out will seek narcotics.

The fourth case involved a boy with neurological handicaps who had been diagnosed early and received special training, but who nevertheless became a police problem. The department understood his difficulty but could really do nothing but witness his self-destruction.

The solution to these types of problems is felt to be in continued medical research so that some day these defects can be corrected. It is suggested to parents that their child carry identification indicating any neurological handicap and use of certain medications, if such is the case. This should help law enforcement agencies to handle the child in the best possible way if there is ever a conflict with the law.

Berman, A. & Siegal, A. Delinquents are disabled: An innovative approach to the prevention and treatment of juvenile delinquency. Final report of the Neuropsychology Diagnostic Laboratory at the Rhode Island Training Schools, 1974.

The authors have reviewed research on the relationship between behavioral disorders and neurological or perceptual abnormalities. They point out the importance of learning more about the neuropsychological characteristics of delinquents in order for effective and realistic rehabilitation to take place. Delinquent behavior cannot be changed only by psychological or sociological techniques when the problem is a neurological or perceptual distortion or deficiency. "A crucial rehabilitation element, then, becomes the ability to distinguish among delinquents, often with similar behavioral symptoms, who will require alternative kinds of rehabilitation programs."

The average age for first time incarceration has decreased to below 13 years of age and the rate of recidivism has increased to around 85 percent. The procedures being used to treat delinquency appear to be ineffective as has the growth of treatment programs without adequate diagnostic screening.

The authors present an extensive review of the research done on neuropsychological approaches to delinquency.

The subjects of the study discussed in this paper were 45 male adolescents incarcerated at the Rhode Island Training School and an equal number of nondelinquent controls matched by age, race, and socioeconomic background. All subjects were examined using the Halstead Neuropsychological Battery, WAIS and WISC batteries, and parts A and B of the Trailmaking Test as summary indices of neuropsychological status. Significant differences were found between the two groups on almost all of the Wechsler scales and on the majority of Halstead's showing that the delinquent group had marked impairment in most critical adaptive abilities. The most severe deficits occurred in the areas of concept formation and utilization, verbal symbolic manipulations, and perceptual organization. The use of discriminant functions based on five neuropsychological predictors (Impairment Index, Verbal I.Q., Performance I.Q., and Trails A and B) allowed correct classification of 87 percent of the delinquents as delinquents.

The authors suggest a series of recommendations on early identification, mandatory screening and evaluation, analysis of skill deficits and appropriate remediation, re-ordering of goals and expectations in vocational training, rehabilitation and follow-up, and training of teachers and rehabilitation counselors.

Dorney, W. The effectiveness of reading instruction in the modification of attitudes of adolescent delinquent boys. Journal of Educational Research, 1967, 60, 438-443.

This study's purpose is to examine to what extent reading instruction mitigates the maladjustment of adolescents who are retarded in reading. It set out to evaluate changes in the behavior and attitudes toward authority figures of adolescent delinquent boys after they received reading instruction.

The 37 subjects were males between the ages of 16 and 20 years, born and educated in New York City, with no history of drug addiction, psychosis, alcoholism, or any acute auditory or visual defect or foreign language problem. The subjects' IQ range was 85 through 110 on the Hillside Short Form of the Wechsler-Bellevue Test and were all at least two years retarded in reading as measured by the California Reading Test.

The 37 boys were divided into three groups equated for age, IQ, ethnic background, and reading ability. Group one was given 50 sessions of reading instruction, group two was given 50 sessions of swimming instruction, and group three was given no instruction at all. The results of the experiment were organized according to the effects of the swimming and reading treatments on attitudes towards authority figures, behavior, and reading ability. In changes in attitude, the largest improvement took place in the reading group.

A follow-up study was done on each boy 18 months after the end of the experiment to determine court involvement. It was found that only two subjects in the reading group had been involved with the courts. This was the lowest rate of recidivism of the three groups.

It is the author's view that these results emphasize the importance of reading instruction, not only for the agencies that service delinquent youth, but also for school systems in the country that have to program for them.

Hogenson, D. L. Reading failure and juvenile delinquency. Bulletin of the Orton Society, 1974, 24, 164-169.

To demonstrate that when school failure in reading begins in primary school the result can often be delinquent behavior during adolescence, the author proposes the following hypotheses: (1) continued failure in the most significant educational task challenging the child--reading--is a deeply frustrating experience when permitted to continue for several years, and usually such failure begins prior to the child developing the ability to think rationally; (2) continued frustration over prolonged periods of time will result in aggressive behavior directed outward toward society (delinquency) or inward toward the self (neurosis); and (3) confined delinquent boys who have failed in reading will have behavioral histories showing more antisocial aggression than confined delinquent boys who were able to read.

Two experimental populations of 48 boys each were randomly selected from two training schools. The data available for each boy included a complete social and behavioral history, including court transcripts and reports of behavior before confinement and while at training school; an individual Wechsler Intelligence Test; a Form K Stanford Achievement Test; a Minnesota Student Attitude Inventory filled out by each boy; a measure of Rokeach's construct dogmatism (Dogmatism Scale); and background information on each boy concerning family, community, economic, and ethnic variables.

The correlations between reading and aggression were .33 for one group and .40 for the other. A t-test for significance showed that both correlations were significant beyond the .05 level. This demonstrates an important correlational relationship between reading underachievement and aggression. The court report proved to be the most reliable measure of aggression across populations. Dogmatic attitudes among the boys were not related to either reading failure or aggression. I.Q. was found to correlate with reading success. The present study was unable to correlate aggression with age, family size, number of parents in home, rural versus urban environment, socioeconomic status, minority group membership, religious preference, etc. Only reading failure was found to correlate with aggression in these two groups. I.Q. was equally related to reading among more or less aggressive boys.

The author recommends adoption of the following proposals: (1) increase the size and efficiency of remedial reading programs, especially in primary schools, (2) redesign existing remedial reading programs to meet individual learning needs, (3) when necessary, delay reading instruction until the child is developmentally and cognitively able to understand failure (to at least age five), (4) continue remedial reading and language programs as long as necessary, even through high school and into adulthood, and (5) if a child is failing in reading, carefully explain to him why; explain that it is not his fault, nor is he dumb, and that reading skill is not the best measure of his worth as a human being.

Hurwitz, I., Bibace, R. M., Wolff, P. H., & Rowbotham, B. Neuropsychological function of normal boys, delinquent boys, and boys with learning problems. *Perceptual and Motor Skills*, 1972, 35, 387-394.

Three groups of boys, fifteen in each group, ranging in age from 14 years, 6 months to 15 years, 6 months, were compared in their performance on the Lincoln-Oseretsky Test of Motor Development. The first group consisted of students with learning disabilities with a mean IQ of 112 and coming from the lower-middle or middle class. The second group was comprised of delinquent boys with a mean IQ of 101 and coming from the lower socioeconomic class. The third consisted of normal boys, mean IQ of 116, and coming from the lower-middle or middle class.

Results indicated that adolescent boys with learning disabilities and juvenile delinquents were significantly retarded in their motor development when compared to normal boys of the same age. Tasks demanding rhythmical repetition posed greater difficulties than nonrhythmical ones for both clinical groups.

In a second experiment, two groups of eleven-year-old boys, 13 in each group, were compared in tests of sequencing skills. One group was composed of delinquent boys having a mean IQ of 96 and from lower socioeconomic levels. The other group was composed of normal boys with a mean IQ of 118 and from middle class backgrounds.

Results indicated that delinquent boys consistently scored lower on tasks of sensorimotor and symbolic sequencing than normals. However, tests of spatial ability did not discriminate the groups.

The authors feel that the statistical association between learning problems or delinquency and deficits in sequencing skills is suggestive. Neuropsychological disturbances, affecting particularly the child's ability to sequence sensorimotor events and symbolic stimuli, may define one general adaptive function in which the two clinical groups are deficient. This is compatible with the observation that both these groups also demonstrated a significant delay in motor maturity. The possibility is also raised that children with delayed or disturbed neuromuscular development are likely to be identified as delinquents when they grow up in a lower class context, and yet be identified as children with learning disabilities if they come from a middle class environment.

Margolin, J. B., Roman, M., & Harari, C. Reading disability in the delinquent child: A microcosm of psychosocial pathology. American Journal of Orthopsychiatry, 1955, 25, 25-35.

The authors are reporting on their experiences in a reception, or intake, unit in a juvenile court system. Seventy six percent of the children screened by the unit were two or more years retarded in reading, and over half of the retarded 76 percent exhibited a disability of five or more years. Case studies indicate that many delinquent children enter school with a characteristic lack of reading readiness and an equally characteristic readiness to discharge hostility when frustrated.

The school, by virtue of content and process, confronts the low socioeconomic level child with a new set of frustrating experiences which confirms his already distorted picture of authority and precipitates the development of the reading disability-truancy-delinquency syndrome. A great majority of the parents are unsuccessful, because of the burdens of responsibility that they are unable to effectively bear and therefore they relate to their children in a punitive, egocentric, and authoritarian manner.

It is the author's opinion that it is our own middle class attitudes that are being reflected when we assume that delinquent children basically want to achieve academically but fail and, therefore, seek recognition through acting out. The authors indicate that delinquent children generally do not value academic achievement and that the acting out is a direct expression of a need for achievement along what are to them socially necessary and feasible lines. The authors, therefore, conclude that conflict between the middle class educational experience and lower-socioeconomic class forces induces processes which tend to produce reading retardation and emotional disturbances. Treatment for these children must involve an approach incorporating treatment techniques designed to deal with the child's unproductive attitudes and emotional conflicts, and remedial techniques designed to yield positive educational experiences leading to a more satisfactory orientation toward reading, school, and other areas of maladjustment.

Mauser, A. J. Learning disabilities and delinquent youth. Academic Therapy, 1974, 9, 389-402.

Learning disabilities and juvenile delinquency are certainly not synonymous terms but they do seem to be overlapping. The incidence of learning disabilities in juvenile delinquents is higher than among the nondelinquent population, however, the nature of this relationship is not clear to the author.

Learning disabled and juvenile delinquent youths share many common characteristics. These include negative self-concept and a low frustration tolerance. Both learning disabilities and juvenile delinquency are more prevalent among males; directional orientation problems are common to both populations; both LD and JD youths evidence a greater occurrence of minimal brain dysfunction; the mean intelligence level is reported similar for both groups; school problems begin in the early years of school for LD and JD youths. Learning disabilities and juvenile delinquency cannot be attributed to a single cause; the etiology is quite complex for both and will not respond to a single mode of treatment and both learning disabled and juvenile delinquents lack positive personality characteristics.

The author discusses treatment programs, the school as a factor, the teacher's role, and guidelines for treatment. The author concludes that some delinquency might be prevented if schools could identify students with learning disabilities and serious malformations of character and personality at an early age and deal with them effectively. In any event, "the delinquent child with a learning disability presents . . . a formidable challenge" that must be met.

Miller, W. H., & Windhauser, E. Reading disability: Tendency toward delinquency? *Clearinghouse*, 1971, *46*, 183-186.

In this article, authors Miller and Windhauser study the relationship between reading disability and delinquency in secondary students. They point out that in many studies on the subject, a positive correlation between the two often exists. Both groups also share certain personality traits including impulsivity, lack of emotional stability, hostility, suspicion, low frustration tolerance, and a negative self-concept. The authors postulate that possibly when a delinquent-prone youngster is unable to learn to read successfully, he may become delinquent as a result of failure and frustration. He needs to succeed in an area where reading is not a factor, and this may cause him to commit illegal acts.

In their opinion "...probably school failure is more highly correlated with delinquency than is any other condition such as poverty or a broken home." Therefore, it is most important for the schools to be aware of how much they influence a student's life; emotional satisfaction should be provided by insuring successful learning experiences. Good developmental reading instruction must be given in the elementary school, and adequate remedial reading instruction available if it is needed later on. This can be one solution to the problem of helping the delinquent student achieve a satisfactory adjustment and get back on the right track.

Mulligan, W. A study of dyslexia and delinquency. Academic Therapy, 1969, 4, 177-187.

The author is a probation officer with the Special Supervision Unit of the Sonoma County Probation Department. This unit instituted the screening of youngsters referred for delinquency in order to explore the possibility of dyslexia in these kids. They are concerned about the correlation between delinquency and dyslexia (described as defect of language: talking, reading, writing, spelling, speech).

In the spring of 1968, sixty juveniles were screened for chronological age, grade placement, and reading level. Results indicated that ten were reading at or above grade level, eleven had no record available, and the rest were reading below grade level. Subjects ranged from the seventh to the twelfth grade, and from thirteen to seventeen years of age. Of the forty nine subjects for whom there was data, ten to twenty percent were reading at grade level and eighty percent were reading below grade level (inadequate readers). Reading levels were reported grossly as yearly (sixth, seventh, eighth, etc.) levels.

The screening battery included the following assessment devices: PPVT for I.Q., WRAT for reading levels, gross and fine motor coordination, cerebral dominance, visual and audio discrimination, directional confusion, draw-a-man (himself), number recall, and rhythm sequence and retention test.

Preliminary screening revealed a large (significant) number of kids who may have learning disabilities--especially among those referred for delinquent tendencies such as truancy, running away, or acting out behavior in the classroom or at home.

Mulligan, W. The NH adolescent and juvenile law. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

In this article, some problems facing neurologically handicapped children are discussed by a probation officer from Sonoma County, California. His department has taken a great interest in these children, many of whom are seen in his office as the result of frequent truancy from school. Through training and research, the department has devised a screening test that gives considerable information concerning a child's specific learning disability and is also used to develop a report for referral purposes.

The author feels that it is essential for probation officers and courts to have some knowledge of specific learning disabilities because the disposition of a youngster's case may materially affect his freedom and future attitudes toward justice and society. If a child is punished for running away from a school situation where he is frustrated and misunderstood, then the injustices against him are only compounded. If his "acting out" behavior is the result of a learning problem, someone must be interested enough to get some help for the child before he does irreparable harm to himself or to society.

In this article, the term learning disabled refers to children of average to superior intelligence who, because of minimal cerebral dysfunction, perceptual problems, or other difficulties, suffer a specific language disability that prevents them from achieving academically in their regular classroom setting. When these youngsters are treated as delinquents and their difficulties blamed on emotional problems, we may be encouraging further antisocial behavior. If they are housed in institutions with children who have violated criminal law and are accepted (maybe for the first time in their lives) for their nonconforming behavior, this behavior is likely to be repeated.

Education is badly needed for people who work with children so that they will be sensitive to the symptoms of the neurologically handicapped youngster. School programs should be expanded to provide for their education. Parent groups must be relied upon to bring their problems to public attention, and the whole community should be willing to support the cost of this overall educational program, which will ultimately be of benefit to all of society.

Rice, R. D. Educo-therapy: A new approach to delinquent behavior. Journal of Learning Disabilities, 1970, 3, 16-23.

A treatment model called "educo-therapy" was designed to remedy the learning deficits and maladaptive behaviors of ten delinquent girls, ages 11 to 15, in a Tennessee State Institution for correction. The treatment model, used in an experimental pilot project for three months, involved facets of several different theories and procedures. The underlying basic philosophy of educo-therapy held that each girl was worthy of respect and love. The treatment philosophy stated that each girl should experience success in school (particularly in reading), learn modes of behavior that are socially acceptable, have her self-concept enhanced, and learn to assume the responsibility of the consequences of her behavior.

The goals of the treatment program were phased in three progressive levels, each designed to meet basic developmental needs. The objective was behavior modification through educational improvements and improvement of self-concept and social integration.

Improvement was evidenced in the language and reading performance of nine subjects on a posttest of the Gates Reading Survey Test. Gains ranged from two months to 13 months in grade level. Full scale scores on the posttest of the Wisc were raised from one to 17 points. Improvements in personal appearance and acquisition of social etiquette made the subjects more socially acceptable.

It was predicted that if the child could experience success in learning and find gratification and reinforcement in academic achievement, many of her maladaptive behaviors which were most in evidence within the classroom, would be remedied. One of the deficiencies of this study, according to the author, was the lack of comprehensive posttesting. However, in a subjective evaluation by the staff of the conservative institution used in the study, enthusiastic support was given to the belief that "educo-therapy" shaped academic learning into the behavioral repertoire and provided an effective means of coping with disruptive emotional behavior. A modified version of the pilot project treatment program has been incorporated into the regular program of this institution.

It is the author's opinion that in terms of institutional economics, this in-depth, concentrated approach to educational remediation and behavioral therapy is more economically feasible than long-term incarceration without the treatment program.

Silberberg, N. E.,& Silberberg, M. C. School achievement and delinquency. Review of Educational Research, 1971, 41, 17-34.

Numerous studies have investigated the relationship between delinquency and reading disability. Because of such variables as differences in samples and definitions of delinquency, the results of these studies have been somewhat inconclusive and often confusing. In general, the evidence does seem to support a correlation between reading disability and delinquency.

As is the case with delinquency, there are many theories which try to explain causation of reading disability. Research indicates a common etiology for both problems. Whether the relationship between the organic and behavioral conditions is causal or merely correlational has not as yet been adequately examined.

There have been indications in the literature that delinquent boys exhibit a lack of abstract linguistic ability. The authors question whether highly abstract teaching methods are suitable for all children entering school. Once a child does enter school and is repeatedly frustrated by his inability to learn by the regular class methods, it seems quite likely that some form of protest behavior would result.

An alternative approach would be the expansion of the number of educational options available. Attempting to guide youngsters into the mainstream by emphasizing remedial work in the skills in which they are deficient seems to the authors contradictory and probably doomed to failure.

The authors have developed a bookless approach to education which relegates reading to the status of an isolated skill which is taught separately, while all other avenues of learning are used for the actual education of the child. Vocational curricula may be made more relevant by enabling students to enter into meaningful occupations through schools or privately financed training programs. Personnel policies in business and industry can be changed so that a high degree of literacy is not a prerequisite for positions in which literacy is not functionally necessary. Tangible rewards are important to the delinquent and some programs have demonstrated that meaningful employment can reduce recidivism. Research findings indicate that academic success is related to getting a job and to the amount of training required to achieve proficiency in the job, but that success on many jobs after training is not related to school success.

The authors suggest that it is not the talents of the children which require changing, but rather it is the values and institutions of our society which must be redesigned to accommodate the variety of talents which the children possess.

Tarnopol, L. Delinquency and minimal brain dysfunction. Journal of Learning Disabilities, 1970, 3, 200-207.

The author believes that the delinquent school dropout population from minority group ghettos contains a greater percentage of children with minimal brain dysfunction than does the total delinquent population. The term "minimal brain dysfunction" is used to designate the medical entity related to the educational term "learning disabilities."

In this study, 102 males, ages 16 to 23 years of age, primarily from minority group ghettos, were examined and tested. Almost all had dropped out of school and had engaged in varying degrees of delinquency. A substantial amount of untreated medical and dental problems were found. On the Wechsler Adult Intelligence Scale, 39 percent had significantly different Verbal and Performance I.Q. scores. The mean grade at which they dropped out of school was 10.5. Fifty eight percent of this group was reading below the sixth grade level on the Gates Test of Reading for General Significance. On the Bender Visual-Motor Gestalt Test only one-third were in the normal range. Comparison of the Bender Tests with the Oseretsky Test of Motor Proficiency indicated that most of their visual-motor problems were related to visual-motor integration and motor coordination. Comparison of the Bender test with the Closure Flexibility Test showed that only a small portion of the visual-motor problem was related to disturbances of visual perception.

The author feels that these test results show that a significant degree of minimal brain dysfunction exists in the minority group, delinquent school dropout population. This evidence should be used to encourage the revision of existing special programs for the minority poor which do not seem to be accomplishing their purpose. Too few of the intervention programs, which are aimed at raising the reading and educational levels of disadvantaged children, consider that a significant segment of this population needs individual medical, psychological, and educational diagnosis followed by prescriptive teaching in order to learn. The earlier this is begun, the more successful the program will be.

Chapter VI

The Learning Disabled Adolescent: Self-Perception

Birr -- The effects of treatments by parents and teachers on the self-concept of ability held by underachieving early adolescent pupils.

Bright -- The adolescent with scholastic failure.

Brunner, Starkey -- Interpersonal relationships and the self-concept.

Giffin -- How does he feel?

Gordon -- Reversing a negative self-image.

Gow -- Dyslexic adolescent boys: Classroom remediation is not enough.

McDonnell -- The comparative effects of teacher reinforcement of self-esteem and of academic achievement on affective variables and achievement in learning disabled children.

Rosenthal -- Self-esteem in dyslexic children.

Birr, D. J. The effects of treatments by parents and teachers on the self-concept of ability held by underachieving early adolescent pupils. (Doctoral dissertation, Michigan State University) Ann Arbor, Michigan: University Microfilms, 1969. No. 69-16119.

Birr's purpose in this study was to investigate and compare two methods designed to increase the self-concept of ability held by a random sample of ninety underachieving seventh and eighth grade students. The test population included students who achieved below a "C" level grade point average at the end of the first grading period in math, language arts, and social studies and whose I.Q.'s ranged from 88 to 137. One group of 30 students was treated (using various procedures) by their parents, another group of 30 received support and encouragement from fifty expert junior high teachers, and the third group served as the control. The treatments were designed to increase the youngsters' belief in their ability and thereby increase their school achievement.

The results indicated no significant association between self-concept and grade point average in any of the groups. The parent group did not have a higher mean self-concept than the other two, contrary to expectation, nor did the parent group have a higher mean grade point average than the other groups. The only statistically significant correlation was found between the child's self-concept of ability and the parent's perception of the child's abilities.

Several similar studies found significant differences in the experimental means at the end of a three year period. This experiment was carried out over a seven month period. Birr believes that parents had begun to assume their rightful role in their children's educations near the close of the experimental period, and that if the study had been continued for another school year significant results would probably have been attained.

Bright, G. M. The adolescent with scholastic failure. Bulletin of the Orton Society, 1969, 59-65.

The author, a doctor involved in adolescent medicine, expresses the belief that in many cases problems such as stealing, running away, headaches, as well as other physical symptoms are the result of scholastic failure. The concerned physician faced with the somatic complaint of a teenager should evaluate from the standpoint of the total individual. The medical history should include questions about attitudes and feelings toward teachers and school. It is sometimes advisable for the doctor to call the school to find out about the child's academic performance and social adjustment. A careful neurological evaluation should be considered essential along with the routine laboratory tests. As important as any of these, is for the physician to spend time alone with the youngster to give him a chance to talk about his feelings and fears.

In cases where a school problem does exist, steps should be taken to alleviate the problem as quickly as possible. Some children may benefit from a tutor or perhaps adjustments in the educational program. If the problem is one which involves a learning disability, the greatest benefit that can be provided to the child is early detection of his difficulty. Teachers as well as physicians must be on the alert for the bright child who is having trouble with reading and spelling or with workbooks or copying from the blackboard. They must be aware of the kinds of errors he makes, rotations, reversals, confusion over look alikes, and bizarre spelling. Any clue that points to the possible existence of a learning problem should never be ignored. Early evaluation and remediation can be the difference between a life of academic success and one of failure.

If the professionals who deal with the children are sensitive to their needs and are willing to help, many of the so called "problem children" can perhaps be redirected into more productive channels, according to Bright.

Brunner, J., & Starkey, J. Interpersonal relationships and the self-concept. A paper written at Northern Illinois University, DeKalb, Illinois, 1974. (ED 089-515)

The authors attempted to prove the hypothesis that high school students in special education programs for learning disabilities or emotional disturbances would have a lower self-concept than those enrolled in remedial or average classes.

A group of sixty five high school students were tested using the Scale of Fundamental Interpersonal Relations Orientation-Behavior. Six areas were examined: expressed behavior of inclusion, control, and affection, as well as wanted behavior of inclusion, control, and affection.

The results revealed that the hypothesis was incorrect. The remedial group scored lower than the learning disabled adolescents in the area of expressed control. The remedial group also scored significantly lower than the emotionally disturbed students in wanted behavior, lower than the average students in expressed control, and lower than all groups in wanted control and wanted affection.

The authors conclude that students enrolled in remedial classes have lower self-concepts than the average or special education students.

Giffin, M. How does he feel? In E. Schloss (Ed.), The educator's enigma: The adolescent with learning disabilities. San Rafael, California: Academic Therapy Publications, 1971.

From a psychiatric point of view, a child with a learning disability is structurally damaged--he has an ego deficit. An autonomous ego function in another child, the ego deficit manifests itself in the learning disabled child as a deficiency in speech, language, perception, or memory.

Parents and preschool teachers are dealing with these misperceptions from the very beginning. These children do not respond to the nursing experience; they do not respond to the usual kinds of home environment; they are hypersensitive or distractible; and they are often hyperkinetic. These children are damaged intrapsychically. They are damaged by the interactions that necessarily occur out of their frustration, both with themselves and with their parents. They are also damaged by the parental need and society's need to deny the presence of difficulty.

The child is faced with the disabling factors of his handicap, and added to all of this, is the impact of adolescence. Giffin views adolescence as a special form of reality. Adolescents are mercurial and variable; these varients of personality are in all adolescents, not just handicapped youngsters.

It is the author's opinion that the problem we have with these children is to listen to the confusion of their emotions. Their problems with thought, with learning, and with behavior are recognized most of the time. The feelings, however, are often forgotten. This is the area in which we need to move. The sensations, the desires, and the emotions of children are too often ignored. There is no education, no learning without emotion. There is no child without emotion. The problem is communication. It is necessary to refine our focus to the feelings of the adolescent, whatever his academic skills. It is the author's opinion that every adolescent with a learning disability has a psychiatric problem as well.

Gordon, S. Reversing a negative self-image. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

In Gordon's view, the existence of a negative self-image is the major stumbling block to the ultimate adjustment and employability of the neurologically handicapped youngster. Major areas of importance in reversing this negative feeling are considered in this article. They are: a reasonably good relationship with one's parents; friends; self-awareness of assets and limitations; a wide range of things to do and interests; savoir faire; and a minimum of functional academic skills. This article focuses on prevocational training and guidance.

It is felt that most neurologically handicapped children need protection, and that parents should not hesitate to offer it when needed. Parents need to be understanding of their child's difficulties in making friends, learning in a competitive setting, and accepting his own handicap. The emphasis in the home situation should be on guided independence, with an effort made to avoid chronic struggles of will. Overprotection can be very destructive, but so can treating the child as though he were like everyone else. His problems must be faced openly, and efforts made to work around them. Inappropriate or obnoxious behavior should not be reinforced if the youngster is to learn to live in society.

Friends play a very important role in improving one's self-image. The author feels that wherever possible, the handicapped child should try to make friends with peers in regular classes or in the neighborhood, rather than limiting his social contacts to other handicapped people. This is best accomplished in well structured, noncompetitive activities which are not threatening to the child.

Neurologically handicapped youth often seem to lack self-awareness, especially with respect to their impact on others. This is probably due, in part, to their impaired capacity for abstraction. "Thus, direct instruction, guidance, learning by doing, etc., seem to be indicated, rather than expecting the youth to be able to anticipate behavior or profit from previous related experience." Having a thorough knowledge of his handicap and what kinds of situations are best avoided can help prevent unpleasant occurrences with resulting aggressive or embarrassing behavior.

Leisure time activities can be a source of great pleasure and can help in developing positive feeling about one's self. A child who is compulsive or perseverative can become quite an authority in areas that involve collecting--either tangible things or facts. Any interests should be encouraged, and skills developed in those areas. Success in any endeavor can help offset feelings of failure in the classroom.

In the area of knowing the "right thing to do," the author believes these children should be exposed to magazines and books reflecting social mores and styles of dress, as well as being taught manners at home. He feels very strongly that they must be given a comprehensive education in sex and the language associated with it, so that they won't be subjected to ridicule by their peers.

A minimum of academic skills is viewed to be a sixth grade level in reading and math. Most important in the teaching of neurologically handicapped children is individualizing instruction to suit the needs of each child.

In conclusion, success in life will depend upon the individual's attitude about himself to a much greater degree than on the nature of his disability.

Gow, D. W. Dyslexic adolescent boys: Classroom remediation is not enough. Bulletin of the Orton Society, 1974, 24, 154-163.

The author has been working with dyslexic adolescent boys of above average intelligence, defining above average as over 105 WISC. His functional definition of dyslexia is a condition wherein a student is unable to write, spell, and read as well as he can think.

The language disability, along with classroom failure and pressure from parents and teachers are just more problems added to those inherent in adolescence. The academic morale and self-concept of these dyslexic adolescents is low; their attitude is seldom friendly--previous experience has made them suspicious and hostile.

In addition to their reading disability, these youths are hampered by their inability to translate spoken words into thoughts they can understand. They also suffer from maturational lag, both physical and emotional.

The author warns that unless these children's self-confidence and self-esteem is raised, it is highly probable that they will wind up in trouble-prone situations. He suggests a highly structured academic environment coupled with an athletic program. He has found a great deal of success in approaching the problems of social confidence with a weekly session called Interpersonal Relations. The boys meet in large groups of 35 to 40, in which they gain confidence from speaking before the group and from the praise they receive. They devote time to cooperative problem solving sessions and in the process begin to view themselves as an integral part of the group.

McDonnell, M. K. The comparative effects of teacher reinforcement of self-esteem and of academic achievement on affective variables and achievement in learning disabled children. (Doctoral dissertation, University of Southern California) Ann Arbor, Michigan: University Microfilms, 1975. No. 75-25,541.

McDonnell's study investigated whether improvement in self-concept, academic achievement, school-related behavior, and attitude toward school were associated with teacher's reinforcement for desirable, affective, person-oriented behavior, or cognitive task-oriented performance.

Subjects were 39 students, 10 to 17 years old. They were divided into eight groups. In four of the groups reinforcement was only for affective improvement (Treatment A) and in the other four groups it was only for cognitive achievement (Treatment B). Lessons were designed to insure that the only difference between groups was due to treatment rather than to assignments.

Measures employed were the Coopersmith Self-esteem Inventory (SEI), Peabody Individual Achievement Test (PIAT), Coopersmith's Behavior Rating Form (BRF), and Burks' School Attitude Survey (SAS). Four groups were pooled as one replication and four groups as another, in order to assess interaction within and between groups with the treatments.

The findings indicated that: (1) there was no difference in posttest or change scores on the SEI between Treatment A and B children's self-concept; (2) the PIAT showed no difference between groups in total achievement; (3) Treatment B children reported more positive and negative attitudes on the SAS, yielding inconclusive results; and (4) Treatment B children, reinforced cognitively, rated higher in posttest on observed esteem behavior, while both groups had positive change scores.

Findings did not support the basic hypothesis that general improvement of performance would result from reinforcement of self-esteem, rather than from impersonal reinforcement of only cognitive achievement. On the contrary, in this study reinforcement for academic achievement was somewhat more productive for learning disabled children than was reinforcement for self-concept.

Rosenthal, J. H. Self-esteem in dyslexic children. Academic Therapy, 1973, 9, 27-39.

Subjects in this study of self-esteem in dyslexic children were sixty Caucasian boys between the ages of eight to fourteen years. They were divided into three groups of twenty boys each. Group I contained twenty boys who had been diagnosed as dyslexic. This group was divided into two subgroups: (1) those from families having some understanding of what it is like not to cope with reading material (DNM), and (2) dyslexics from families who had not heard the term and had no experience with the consequences of dyslexia (DM).

Group II contained twenty boys having no school or reading problems and matched as closely as possible for age, ethnic group, and socioeconomic class with the members of the dyslexic group. This control group of boys was selected by the dyslexic boys and their families to try to achieve close similarity of cultural and social backgrounds. Group III contained twenty asthmatic boys as closely matched as possible to the dyslexic group.

The Coopersmith Self-esteem Inventory (SEI) was given to each child. The questions on the test were taped for the dyslexic group. In an effort to determine the correlates between subjective statements and behavioral expressions of self-esteem, the Coopersmith Behavior Rating Form (BRF) was sent to the teachers of all subjects.

The ten DNM boys showed significantly higher self-esteem than the ten from DM families. Teachers' estimates of classroom behavior showed no significant differences among the three major groups of boys, probably reflecting the teachers' awareness of the diagnosis and perhaps reflecting allowances made for the handicapped children. Two other possibilities are that asthmatic children, who usually do have psychological problems, were rated lower than healthy children would have been rated; and that the controls chosen by the dyslexics may have had psychological difficulties or other types of problems which lowered their behavior rating.

The behavior rating scores for the DM and DNM dyslexic subgroups did not differ significantly; but a significant difference in the variance ratio indicated that the teachers of the DM subgroup had wider ranges of judgements about the classroom behavior of these children than had the teachers of the DNM subgroup. No significant correlation between SEI and BRF were noted among any groups, indicating that all of these subgroups showed divergence between self-assessment and behavioral assessment by others.

Informational methods have been found valuable in educating affected families in the etiology, management, and sequelae of mismanagement of dyslexia, as well as other learning disabilities.

Chapter VII

Guides for Parents of the Learning Disabled Adolescent/Medical Considerations

Faigel -- The medical needs of neurologically handicapped adolescents.

Friedman -- Medical considerations in adolescent underachievement.

Gordon -- The brain injured adolescent.

Kronick -- Guidelines for parents.

Faigel, H. C. The medical needs of neurologically handicapped adolescents. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

Adolescence is an extremely emotional, often difficult time in any youngster's life. School and peer pressures are felt very strongly, and the need to be "like everyone else" makes it painful for the child who is in some way different. The author, a pediatrician, believes that it is most important for a teenager to have a good relationship with his doctor, especially in the area of confidentiality. The physician should view his patient as an adult and should be a good listener if he is to gain the youngster's trust.

Faigel feels that children with neurological handicaps, as represented by a lack of physical and muscular coordination, will respond quickly and well to physical therapy. Success in learning fine motor skills may give the youngster the emotional strength to attack other learning as well. The assistance of a specialist in rehabilitative medicine, in testing, prescribing therapy, and evaluating progress, is important.

Various drugs are used in the treatment of neurologically handicapped children, including stimulants, tranquilizers, antidepressants, and anticonvulsants. A high protein diet and a nourishing breakfast are extremely beneficial for optimal functioning. When the individual's emotional problems are severe, therapy should be sought for him and for other family members. Group therapy sessions are often helpful because the youngster is made aware of the fact that many other teenagers also have difficulty in adjusting.

The team approach to the total needs of the neurologically handicapped adolescent, together with a willingness to experiment and to improvise, are viewed by the author as the most important parts of the medical care that can be offered.

Friedman, S. B. Medical considerations in adolescent underachievement. Journal of School Psychology, 1971, 9, 235-240.

Friedman's paper is concerned with the physician as a consultant in cases of academic underachievement in adolescents. His first point is that the pediatrician differs from the neurologist in many important ways. Diversity in training, background, professional philosophies, etc., can cause them to arrive at unlike conclusions when evaluating the same case; educators must keep this in mind.

Physicians play an important role in the academic multidisciplinary team but, according to this paper, they often need guidance from the non-medical personnel. They are too accustomed to being "team captains" rather than members. The author also believes that pediatricians should have clinical experience in the schools included in their training.

Any physical illness, whether or not it is disabling, will lead the student to problems in school; absence is harmful in itself. The author reports on a study which proved that mothers who are physically disabled or have a high incidence of medical problems tend to keep their children home from school for even minor complaints. Therefore, when a child is often absent his mother's health should also be considered.

The author warns against the careless use of the minimal brain damage diagnosis. He feels that the term itself is not exact enough; it can allude to many disorders. Parents and the children themselves tend not to understand the term and quite often confuse it with something like insanity. The diagnosis itself will change the child's life; he will probably be overprotected by parents and his self-image will become damaged. "The benefits of remedial and special educational programs must be carefully weighed against some of these undesired side effects."

The author feels that the use of the specialized neurological examination when diagnosing minimal brain damage is questionable. He also feels that the use of the EEG has been overrated. "...the main function of the EEG is to rule out the existence of a major unsuspected neurological problem, and not to establish the diagnosis of minimal brain damage." He strongly believes that the use of these devices, as well as the services of the physician, should be studied much more thoroughly.

Gordon, S. The brain injured adolescent. East Orange, New Jersey: New Jersey Association for Brain Injured Children, 1966.

Gordon's booklet provides a guide for the parents of learning disabled adolescents. The opening section discusses the brain injured child, his characteristics and special needs. The bulk of the paper is a list of practical suggestions for parents to aid them in understanding and helping their children.

The author has drawn upon the questions asked by parents over the years and has come up with eighteen topics of discussion. Each discussion is complete with specific suggestions. The importance of social experiences and how to arrange appropriate situations, as well as why and how to structure and guide the "world" of the learning disabled are the first two topics.

Other points touched upon include: teaching social skills, providing the adolescent with success, leisure time activities, choice of friends, how much television, what about driving a car, is psychotherapy helpful, and the question of sex.

Fantasies, coping with repetition, resentment from other children, success in school, reverse psychology, the future, and what to tell the child about his condition are also delineated.

Kronick, D. Guidelines for parents. In L. Anderson (Ed.), Helping the adolescent with the hidden handicap. Los Angeles: California Association for Neurologically Handicapped Children, 1970.

The author urges parents of minimally brain-damaged children to adopt a realistic and practical attitude about the present status and future directions of their youngsters. Parents of adolescents with MBD must come to terms with the residual defects of their children's problems and determine or plan how to help their child become a better, more fully functioning person. Some areas of concern are self-awareness, social ability, grooming, independence, work patterns, maturity, philosophy of life. It is as essential to devote effort toward increased effectiveness in these areas of functioning s it is to spend time on academic improvement.

Elementary level programming for MBD children concentrates on remediation and habilitation of disabilities. At the secondary level, emphasis should shift to strengths and the student's program should be designed to capitalize on areas of strengths or at least those areas of lesser handicap. The decision will have to be made between vocational and academic training--what proportion of the school day will be devoted to each area. It is cautioned that the child not be committed to an unalterable long-range plan too early in his school career, as this placement may be mistakenly based on either an over or underestimate of the child's abilities. Instead, the author suggests that the child's program be geared to his present abilities and that future employment plans evolve gradually through mid-adolescence. The appropriate secondary school stream for the MBD student must be consistent with the child's intelligence, aptitudes, motivation, and the severity of his handicap--as well as the adaptability of the secondary school personnel and their willingness to modify their programs to his needs.

This paper, in essence, exhorts parents to help their handicapped children develop into total persons in preparation for adulthood.

Chapter VIII

Training Programs for Teachers of Secondary Learning Disabled Students

Pearl -- Description of a secondary SLD teacher-training program and its clientele.

Zigmond -- Preparing teachers for secondary learning disabilities programs.

Pearl, S. Description of a secondary SLD teacher-training program and its clientele. In J. Arena (Ed.), *The child with learning disabilities: His right to learn*. Proceedings of the Eighth Annual Conference, ACLD, Chicago, 1971.

This report describes the Educational Professional Development Act, a federally funded nine month program which was designed to train twenty people with bachelor's degrees to become secondary learning disabilities (SLD) teachers and to attempt successful intervention with secondary students who displayed serious learning difficulties. The project was sponsored jointly by the St. Paul public schools, the University of Minnesota, and the Minnesota Department of Public Instruction.

The training received during the first half of the program included lectures, sensitization experiences, demonstrations, field trips, simulated tutorial experiences, direct instruction with university professors in remedial academics, curriculum preparation, feedback sessions with supervisors, and graduate courses at the university.

During the second half of the project, the trainees were sent in teams of two, three, and four to eight secondary schools which service 285 secondary learning disabilities students. The schools were a mixture of inner city, fringe area, middle class, and upper middle class schools. The trainees participated in screening students in the lowest 10 percent of the class in reading comprehension or vocabulary, examining achievement test scores, and looking for discrepancies between verbal and quantitative measures. Each trainee taught a maximum of fifteen SLD pupils weekly, with close supervision.

The greatest emphasis of the training program was on remedial academics. The experiences of the trainees in the eight placement situations are discussed, including problems, emphasis of instruction, and communication between team members.

It was the opinion of the supervisory staff that the trainees who either worked together in the same room or who had good communication within their school developed the most relevant and flexible programs to meet the needs of their students. Those trainees who were operating in isolation from one another seemed to be most restrictive in their teaching, and tended to follow the training model too closely.

Zigmond, N. Preparing teachers for secondary learning disabilities programs. A paper presented at Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pa.) Intermediate Unit, Norristown, Pa., March 1975.

Zigmond views the growth of secondary level learning disabilities programs as discouraging evidence of a real and serious need. She views a learning disability, not as "a condition, an irritant, or an unwanted characteristic possessed by a child" but as a breakdown in communication between a teacher and a student. The learning disabled secondary level student is the product of this failure.

But the growth of secondary learning disabilities programs is discouraging for another reason as well. Many students are in those programs "because the mainstream of education has not realized the need for individualized and personalized schooling and schools." Programs often appear to be content oriented rather than student oriented "and there is little room for flexibility and little attention paid to individual differences and individual needs." It may well be that the need for special programs would disappear if schools adopted a broad curriculum and programs were "highly flexible with ample opportunities for student participation in planning and carrying out of learning experiences." There is some question as to whether the preparation of special teachers for special students may be construed as "absolving the mainstream teacher of the need to develop those attitudes and skills which would help him or her to move in the direction of a more personalized curriculum."

Zigmond, working from the premise that even if elementary and secondary programs improved there would still be adolescents in need of special help, discusses the problem of selecting teachers for those students. She observes that while it is generally assumed that elementary school teachers do not possess the skills or the background to work successfully with adolescents, no empirical data appears to exist which validates those assumptions.

Expert opinion seems to be in agreement that successful teacher training programs must train teachers of learning disabled adolescents to do the following: (1) know about and deal with educational, social, and affective implications of a learning problem; (2) informally and formally assess the academic skills of students; (3) write educational prescriptions utilizing assessment information; (4) be proficient at teaching in all areas, particularly in the skill areas of reading and math; (5) be familiar with instructional programs at all levels; (6) create age appropriate teaching materials; (7) be familiar with and able to modify the high school curriculum where necessary to accommodate learning disabled students; (8) be proficient at testing readability levels of textbooks; (9) demonstrate effective classroom management strategies; (10) be effective in communicating with other teachers; (11) assume the role of child advocate and interact effectively on behalf of the child with other members of the staff; (12) know the functions of community and governmental agencies and volunteer and non-profit groups which provide support services to learning disabled adolescents; and (13) provide career orientation within the program and help students decide on goals.

But present nonstandardization of teacher preparation programs is more than an issue of academic freedom; it indicates that we do not, as a field, have a clear idea of what we expect a teacher to do and what she or he must know to do it well. Zigmond suggests that we must, as a field, be prepared to specify explicitly what knowledge we expect of a teacher, what teacher behaviors are expected, and what pupil outcomes are to be expected at the close of the program. And while expert opinion is an appropriate way to begin to define these three areas of specification, we must also be able to establish that those items previously listed actually represent what successful teachers really do. While systematic research in the area of adolescent learning disability is clearly needed, it is not clear that it is forthcoming or even planned. Without hard data most of the key questions posed here and elsewhere cannot be answered, regardless of our expert opinion, speculation, or passionate commitment.

Appendix A

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Exceptional Children
Journal for Special Educators of the Mentally Retarded
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Journal of Child Psychology/Psychiatry
Journal of Educational Research
Journal of Learning Disabilities
Journal of Reading
Journal of Rehabilitation
Journal of School Health
Journal of School Psychology
Journal of Special Education
Journal of Speech and Hearing Disorders
Journal of Speech and Hearing Research
Neuropsychologia
Perceptual and Motor Skills
Pointer
Psychology in the Schools
Reading Research Quarterly
Reading Teacher
Rehabilitation Literature
Review of Educational Research
Slow Learning Child
Special Education
Special Education in Canada
Teaching Exceptional Children

Conference Proceedings

ACLD Annual Conference Proceedings
CEC Selected Convention Papers
Learning Disabilities in the Secondary School, a symposium sponsored by the Montgomery County (Pennsylvania) Intermediate Unit, Norristown, Pa., March 1975
National Reading Conference
TESOL Conference

Indexes

CEC — Exceptional Child Bibliography Series
Dissertation Abstracts
Education Index
ERIC Current Index to Journals in Education
ERIC Research in Education

Computer Searches

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